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American Canyon

*Sphere of Influence
Update*

Initial Study

*Local Agency Formation Commission
Of Napa County*

JANUARY, 2004

INTRODUCTION

This initial study addresses changes to the City of American Canyon sphere of influence proposed by Napa County LAFCO in accordance with the requirements of the Cortese-Knox-Hertzberg Act of 2000. LAFCO has completed a municipal service review and sphere of influence review for the American Canyon vicinity in order to determine the appropriate growth and expansion of the city. This initial study addresses the proposed changes to the American Canyon sphere of influence that resulted from this review.

On December 11, 2003 Napa County LAFCO released an initial study on the proposed American Canyon SOI changes. LAFCO held a public hearing on January 8, 2004 where oral comments on the December 11 initial study were made by LAFCO board members, representatives of the City of American Canyon, and representatives of the County of Napa. LAFCO accepted written comments from the public until January 14. Two written comments were received, both dated January 8, 2004. These comments were submitted on behalf of the City of American Canyon by William D. Ross, City Attorney, and on behalf of the County of Napa by William S. Chiat, County Executive Officer. The comments submitted by the County of Napa included an analysis prepared by the Office of the County Counsel. The written and oral comments put forth the argument that because anticipated future development under either city or county jurisdiction would not be substantially different, the proposed changes to the American Canyon SOI would not lead to development-related impacts that could not otherwise occur under existing conditions. Allowable land uses in the *Napa County General Plan* and zoning ordinance are similar to those in the city's General Plan and comparable development intensities are expected. Thus development taking place in the county could be expected to bring about the same level of impacts as could occur if development took place under the city's jurisdiction subsequent to annexation. For this reason, the SOI changes, the first step towards annexation and development within the city, would not cause different environmental impacts than could occur under the county's jurisdiction without annexation.

Based on these written comments and the oral comments received at the public hearing, Napa County LAFCO staff determined it would be appropriate to revise and reissue the initial study. The Initial Study Environmental Checklist which follows is this revised document. The 30-day public comment period on this initial study will extend from January 23 to February 23, 2004. A public hearing on the document will be held by LAFCO on February 26, 2004.

ENVIRONMENTAL CHECKLIST

1 PROJECT TITLE LAFCO of Napa County
American Canyon Sphere of Influence Update

2 LEAD AGENCY NAME & ADDRESS LAFCO of Napa County
1700 Second Street, Suite 268
Napa, CA 94559

3 CONTACT PERSON & PHONE NUMBER Daniel Schwarz
(707) 259-8645

4 PROJECT LOCATION Southern Napa County
City of American Canyon vicinity

5 PROJECT SPONSOR'S NAME & ADDRESS

Project Sponsor

LAFCO of Napa County
1700 Second Street, Suite 268
Napa, CA 94559

6 NAPA COUNTY GENERAL PLAN DESIGNATION

Area (1): Agricultural Watershed, Open Space and Agricultural Preserve (AWOS)

Area (2): Industrial

Area (3): Industrial

Area (4): AWOS

7 NAPA COUNTY ZONING

Area (1): Agricultural Watershed (AW)

Area (2): Agricultural Watershed - Airport Compatibility Overlay (AW-AC)

Area (3): General Industrial - Airport Compatibility Overlay (GI-AC)

Area (4): AW-AC

8 DESCRIPTION OF PROJECT

The Local Agency Formation Commission (LAFCO) of Napa County is a state mandated local agency that administers California Government Code Sections 56000 et. seq., known as the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000. This Act charges LAFCO with the responsibility of encouraging the logical formation and development of local agencies in a manner that preserves open-space and agricultural lands and discourages urban sprawl. LAFCO reviews proposals for changes of organization of local governments in Napa County, including annexations and detachments to cities and special districts, the formation of new government districts, and the incorporation of cities.

As part of its legislative responsibilities detailed in the Cortese-Knox-Hertzberg Act, LAFCO is required to establish and update spheres of influence for all agencies (cities and special districts) that

provide municipal services in Napa County and fall under its jurisdiction. Spheres of influence must be reviewed every five years. Government Code §56076 defines a sphere of influence as “a plan for the probable physical boundaries and service area of a local agency, as determined by the Commission.” Government Code §56425 gives purpose to the determination of a sphere by charging the Commission with the responsibility of “planning and shaping the logical and orderly development of local governmental agencies through spheres of influence.” This section also presents factors that the Commission must consider when making a sphere determination: (1) the present and planned land uses in the area, including agricultural and open-space lands; (2) the present and probable need for public facilities and services in the area; (3) the present capacity of public facilities and adequacy of public services that the agency provides or is authorized to provide; and (4) the existence of any social or economic communities of interest in the area if the commission determines that they are relevant to the agency.

As of January 1, 2001, LAFCO is required to conduct municipal service reviews in preparation of spheres of influence reviews. Service reviews are intended to provide affected agencies, the public, and LAFCOs with a tool to understand public service conditions and to help determine whether it is appropriate to plan for an agency’s growth and expansion. LAFCO adopted determinations for a service review for the City of American Canyon on August 14, 2003. LAFCO has since completed a sphere of influence review for the City of American Canyon. This Initial Study addresses the proposed changes to the American Canyon sphere of influence that resulted from this review.

Any discretionary governmental activity directly undertaken by LAFCO which has the potential to result in either a direct physical change in the environment or a reasonably foreseeable indirect physical change is subject to the provisions of California Environmental Quality Act (CEQA). As the first step in a series ultimately leading to development within the city, SOI updates are a precursor to future development on lands currently in the unincorporated portion of Napa County after annexation to a city. CEQA defines a project as the “whole of an action,” including the underlying activity being approved by an agency, not just the resulting permits or approvals. Thus, comprehensive sphere of influence updates, undertaken by LAFCO as the lead agency, are defined as a “project” under CEQA and require environmental review.

LAFCO proposes to amend the City of American Canyon sphere of influence (SOI) in four areas to encompass an additional 642.38 acres. The four locations are shown in Exhibit 2 and summarized below:

- Area 1: *American Canyon Road / Flosden Road Intersection.* Approximately 20 acres of a 45.69-acre parcel (APN 059-040-054) located north of this intersection is currently within the SOI. LAFCO proposes to include in the SOI the remainder of this parcel, adding 25.69 acres of undeveloped land to the SOI.
- Area 2: *Watson Lane.* LAFCO proposes to include in the SOI 76.69 acres of mostly developed residential and light industrial properties (15 parcels) which are currently connected to American Canyon municipal services.
- Area 3: *Green Island Road.* LAFCO proposes to include in the SOI 23 parcels totaling 374.94 acres. The parcels proposed for inclusion are generally located on the north side of Green Island Road extending west from the existing SOI and city boundary to the runway fly-over zone of the Napa County Airport.
- Area 4: *“Eucalyptus Groves” near Mazzetta Court and Eucalyptus Drive.* LAFCO proposes to include in the SOI two parcels (APN 058-030-055 and 058-030-056) totaling

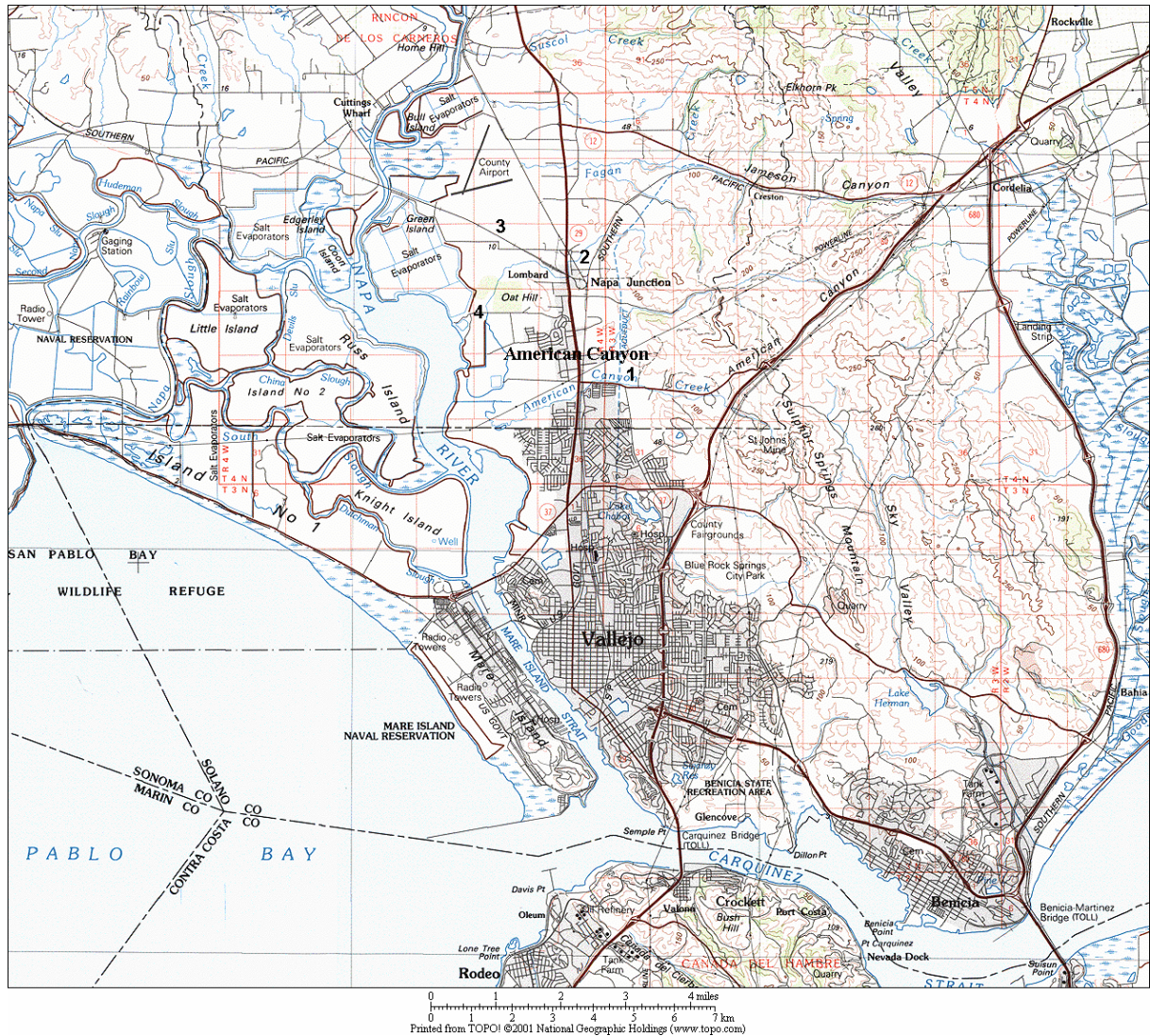
165.06 acres. One parcel is developed with the American Canyon wastewater treatment plant; the other is currently vacant.

Inclusion in the city's SOI would enable annexation of these areas in their entirety if agreed to by a majority of the affected landowners. Individual parcels might be able to annex independent of other parcels under certain circumstances. All four SOI areas were included in the city's General Plan land use planning area.

Development Assumptions The "project" under consideration in this initial study is the proposed change to the American Canyon Sphere of Influence. The change in the SOI is the first step in a chain of actions that will ultimately lead to development in these areas under the jurisdiction of the City of American Canyon. This initial study compares the level of development which could occur under existing conditions, that is within unincorporated Napa County, with the development that could occur if the SOI areas are ultimately annexed by the City of American Canyon. No specific development proposal is being considered in this initial study. A table outlining the existing level of development, potential development in the county, and potential development within the city is provided below. The development expectations are based on analysis of the respective General Plans, other planning documents, and conversations with city and county staff. For the purposes of this Initial Study, buildout in the four SOI areas is expected to occur in 2010. It should be noted that a high school was not specifically projected by either the city or county in its documents for SOI Area 1. Recently the Napa Valley Unified School District (NVUSD) purchased the property for this purpose. However, various city planning documents did anticipate a school eventually being built in this vicinity, as well as residential development or commercial recreational uses. County planning documents anticipated residential uses or commercial recreational uses, including a golf course (which was approved for this and other parcels but never developed).

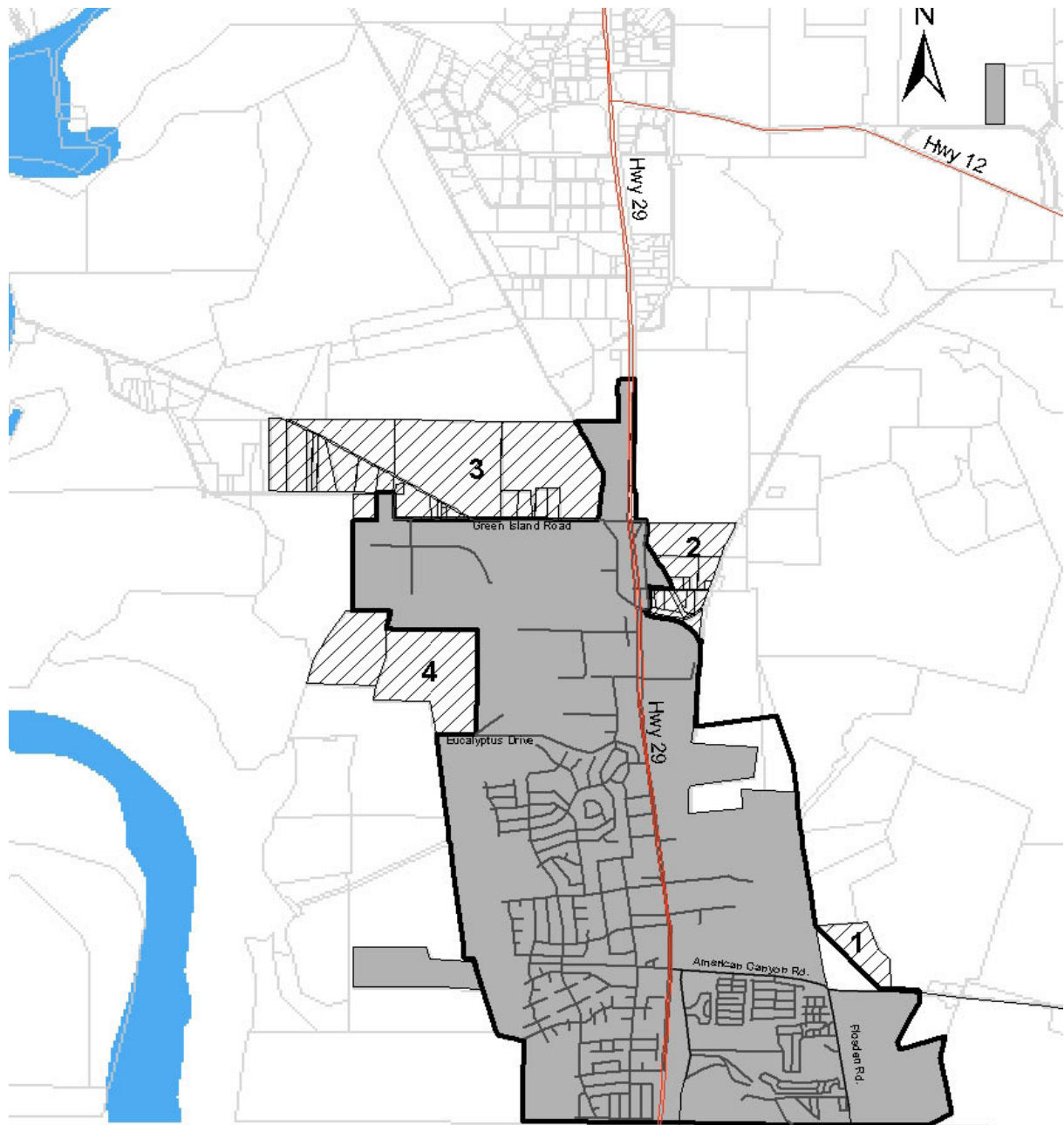
Approval of the proposed project (changes to the American Canyon SOI) would not in and of itself result in development. Further, that properties are placed within a sphere of influence should not be interpreted as meaning that they will be annexed to the subject agency. A sphere of influence remains primarily a planning tool and inclusion in a sphere indicates that LAFCO recognizes that the current or planned use of a property may require increased levels of municipal services that the subject agency can provide, and acknowledges that annexation may be appropriate. LAFCO considers the merits of each annexation proposal and annexation cannot occur without the consent of a majority of the affected land owners and/or affected registered voters. Lastly, additional environmental review would be required at the time of annexation of any individual parcel.

EXHIBIT 1 REGIONAL LOCATION





Source: www.topo.com (United States Geological Survey)

EXHIBIT 2 PROPOSED SPHERE OF INFLUENCE EXPANSION AREAS



- 1 - Property of NVUSD
- 2 - Watson Lane
- 3 - Green Island Road
- 4 - Eucalyptus Groves

-  Recommended for Inclusion in SOI
-  Existing Sphere of Influence

Source: LAFCO of Napa County, November 2003

EXHIBIT 3 2010 DEVELOPMENT PROJECTIONS

SOI Area	Existing Development	County Development Projection	American Canyon Development Projection
(1) American Canyon Road / Flosden Road Intersection 45.69 acres; approx. 20 acres currently in SOI	Vacant	1,000 student High School ^a	1,000 student High School ^b
(2) Watson Lane 76.69 acres	10 single family DUs	13 single family DUs ^c	10 single family DUs ^d
(3) Green Island Road 374.94 acres	4,000 sq. ft. commercial 73,000 sq. ft. industrial	4,000 sq. ft. commercial 1,510,000 sq.ft. industrial ^e	4,000 sq. ft. commercial 1,510,000 sq. ft industrial ^f
(4) "Eucalyptus Groves" 165.06 acres	Vacant	One single family DU ^g	80 acre recreational use ^h

- ^a Based on Nichols Berman conversation with John McDowell, Principal Planner, Napa County Conservation, Development and Planning Department, July 8, 2003 and Dan Schwarz, Executive Officer, LAFCO of Napa County, conversation with John Glaser, Superintendent, Napa Valley Unified School District (NVUSD), September 9, 2003. One single family dwelling unit, a golf course, or vineyards would be permitted under the County General Plan. Please note, a high school was not the assumed future development on this property by the County, however, because the NVUSD recently acquired the site for this purpose, a high school is considered more likely than other potential land uses.
- ^b Based on Dan Schwarz, *op. cit.*, conversation with Mark Joseph, City Manager, and Ed Haworth, City Planning Director, City of American Canyon, July 10, 2003 and John Glaser, *op.cit.* Up to 91 single family dwelling units would be permitted under the city's General Plan. Please note, a high school was not the assumed future development on this property by the city, however, because the NVUSD recently acquired the site for this purpose, a high school is considered more likely than other potential land uses.
- ^c Based on Nichols Berman conversation with John McDowell, *op. cit.*, September 15, 2003.
- ^d Based on the City of American Canyon Water System Master Plan development assumption for portions of Sub-area 32 and Sub-area 25, Figure 3-1 and Table 3-1, February 2003, which are based on analysis of the *American Canyon General Plan*.
- ^e Based on Nichols Berman conversation with John McDowell, *op. cit.*, July 8, 2003 and September 15, 2003.
- ^f Water System Master Plan, *op. cit.*, development assumption for Sub-area 11. Due to the existing 73,000 square feet of industrial development, buildout would result in an estimated 1,437,000 square feet of additional industrial development.
- ^g Based on Nichols Berman conversation John McDowell, *op. cit.*, July 8, 2003.
- ^h Water System Master Plan, *op. cit.*, development assumption for Sub-area 26. The assumed use for the purposes of this report is a park.

9 SURROUNDING LAND USES AND SETTING

The City of American Canyon was incorporated in 1992, which was also the time of the last sphere of influence review. According to the 2000 census, the city's population is 9,774 residents. Located at the southern end of Napa County, the city is roughly 3.6 square miles in size. American Canyon is bounded geographically by the Napa River to the west; the foothills of the Sulphur Springs Mountain Range to the east; the City of Vallejo to the south; and vineyards and industrial development to the north.

10 PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED

A. LAFCO of Napa County

11 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below ☒ indicate that this project would result in at least one "Potentially Significant Impact" as discussed on the following pages. Topics indicated with an asterisk* would result in at least one "Potentially Significant Impact" which would be "Less Than Significant with Incorporation of Mitigation" that the project sponsor has agreed to implement.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology / Soils |
| <input type="checkbox"/> Hazards / Hazardous Materials | <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use / Planning |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing |
| <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation / Traffic |
| <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Mandatory Findings of Significance | |

12 SOURCES

- A.** American Canyon General Plan
- B.** American Canyon General Plan EIR
- C.** American Canyon General Plan Technical Background Report
- D.** American Canyon Zoning Ordinance
- E.** Napa County General Plan
- F.** Napa County Zoning Ordinance

13 DETERMINATION

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect (a) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (b) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed on the proposed project, nothing further is required.

Signature

Date

Printed Name

For

14 EVALUATION OF ENVIRONMENTAL IMPACTS

- A. Aesthetics** Sensitive visual features within and surrounding the City of American Canyon include the eastern foothills, Oat Hill, and the wetlands, marshes, and riparian areas to the west. The *American Canyon General Plan* also identifies the abandoned basalt plant as a significant man-made visual resource.

1. *Would the project have a substantial adverse effect on a scenic vista?*

- ☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Development in the four SOI expansion areas potentially could affect scenic vistas which include the eastern foothills, wetlands areas, or other natural resources. Specifically development in SOI Areas 1 and 2, located at the base of the foothills, and SOI Areas 3 and 4, located near the wetlands area, could affect scenic vistas of these visual resources. However, existing development is already located within the vicinity of these SOI areas, including the residential development near the American Canyon Road/Flosden Road intersection and on Watson Lane. Further, the wastewater treatment plant and commercial warehouses are located near the Area 3 and 4 parcels. The *American Canyon General Plan* includes policies to protect both biological and aesthetic resources. Implementation of Policies 8.2.1, 8.3.1 through 8.3.3, 8.5.1, and 8.18.1 through 8.18.3 would protect those scenic resources significant to the city while accommodating new development. For these reasons, the project's effects on scenic vistas would be less-than-significant.

2. *Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a State scenic highway?*

- ☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

An officially designated state scenic highway is not located within the City of American Canyon. Further, the four SOI areas which are the subject of this Initial Study are not located along a state highway. For these reasons, the project would not substantially damage a scenic resources within a state scenic highway.

3. *Would the project substantially degrade the existing visual character or quality of the site and its surroundings?*

- ☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Same as A.1, above.

4. *Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Project implementation would not introduce new sources of light and glare to the four SOI areas because the majority of these areas are within the general proximity of existing development. Future development would increase the amount of both day and nighttime light and glare sources. The change in the SOI would not directly lead to an increase in the amount of day and nighttime light and glare sources but would indirectly lead to increases should the areas be annexed to the City of American Canyon and development occur. As indicated in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus would result in similar light and glare impacts. Such impacts will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

Aesthetics Conclusion The proposed changes to the American Canyon SOI would result in no significant impacts on the visual character of the four SOI areas.

- B. Agricultural Resources** The California Department of Conservation (CDC) Farmland Mapping Program indicates that a small part of SOI Area 4 is designated Grazing, and the remainder of the four SOI areas are designated Farmland of Local Importance, Urban and Built Up, or Other.¹

The Napa County General Plan designates SOI Areas 1 and 4 as “Agriculture Watershed and Open Space” (AWOS). In SOI Areas 2 and 3, the parcels are designated “Industrial.” Areas 1, 2, and 4 are zoned “Agricultural Watershed” in the Napa County Zoning Ordinance, while Area 3 is zoned “General Industrial: Airport Overlay.”

The *American Canyon General Plan* Land Use Map (Figure 1-1) designates the northern portion of SOI Area 2 as “Agriculture: Special Study Area,” while the southern, developed portion of the area is designated as “Residential Estate.” The other three SOI areas have non-agricultural designations in the *American Canyon General Plan*.

A few of the SOI parcels are currently used in agricultural production, including Area 1 which is used for cattle grazing, while portions of Area 2 are used for livestock and viticulture.

1. *Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

As discussed above, none of the SOI areas considered in this Initial Study are designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance on the CDC Farmland Mapping Program maps. Therefore, the SOI change and eventual annexation to the city would result in no impact on such agricultural resources.

2. *Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☒ Less-Than-Significant Impact ☐ No Impact

The proposed project would involve the addition of new parcels to the City of American Canyon sphere of influence. Inclusion in the city’s SOI would enable the city to annex these areas if agreed to by a majority of the affected landowners.² Therefore, implementation of the

¹ The California Department of Conservation Farmland Mapping Program defines these farmland categories as follows:
Prime Farmland - Farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
Farmland of Local Importance - Land of importance to the local agricultural economy as determined by each county’s board of supervisors and a local advisory committee.
Grazing Land - Land on which the existing vegetation is suited to the grazing of livestock. The minimum mapping unit for Grazing Land is 40 acres.

² Individual parcels might be able to annex independent of other parcels under certain circumstances.

project could allow for the future annexation of land from Napa County into American Canyon. SOI Areas 1, 2, and 4 are currently zoned Agricultural Watershed in the county zoning ordinance, however, this zoning allows for one dwelling unit per parcel to be developed. Area 1 is currently used for grazing, Area 2 includes residential, industrial, and agricultural uses, and Area 4 includes the city's wastewater treatment plant, a eucalyptus grove, 4H farming project, single family home, and a paintball park. Upon annexation into the City of American Canyon, these properties would fall under current General Plan land use designations, which would allow a range of development types. SOI Area 2 would carry the General Plan Agriculture land use designation, while the *American Canyon General Plan* designation for Areas 1 and 4 is Commercial Recreation.

Conversion of county land zoned as Agricultural Watershed to city land with non-agricultural designations does not in and of itself represent a potentially significant impact. In the case of Area 1, development of a proposed high school would not be subject to either Napa County or American Canyon land use restrictions because school districts are permitted by state law to develop in areas that do not have a "Public," "Quasi-Public," "Institutional" or similar land use designation. Further, a permit to construct a golf course on parcels including the Area 1 parcel was issued by Napa County in the past. A golf course would be consistent with the city's Commercial Recreation designation. Thus, conversion from Agricultural Watershed zoning to a Commercial Recreation land use designation would not in and of itself result in nonagricultural development on SOI Area 1. Likewise, the current and anticipated near-term future land use on SOI Area 4 is not agricultural, but rather, a commercial-recreational use (paintball park or similar use). Thus, conversion of SOI Area 4 from Agricultural Watershed zoning to a Commercial Recreation land use designation also would not in and of itself lead to nonagricultural development which could not otherwise occur.

As noted above, the very low density in SOI Area 2 and the city's Agriculture General Plan designation would assure that parcels in Area 2 would remain as open space or agricultural uses. Further, implementation of the project would not result in the cancellation of an agricultural preserve contract. Therefore the project would result in a less-than-significant impact.

3. *Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☒ Less-Than-Significant Impact ☐ No Impact

A few of the SOI parcels are currently used in agricultural production, including Area 1 which is used for cattle grazing and portions of Area 2, which are used for livestock and viticulture. As discussed above, the project would not result in the conversion of these areas to non-agricultural uses. The project would not result in any other changes, such as an extension of infrastructure that could result in the conversion of active farmland to a non-agricultural use. Therefore, this would represent a less-than-significant impact.

Agricultural Resources Conclusion The proposed changes to the American Canyon SOI would result in less-than-significant impacts on agricultural resources.

- C. Air Quality** The Bay Area Air Quality Management District (BAAQMD) is the nine-county regional agency responsible for overseeing compliance with State and federal laws, regulations, and programs within the San Francisco Bay Area Air Basin. The Bay Area generally is one of the

cleanest major metropolitan areas in the country with respect to air quality. The air pollutants of greatest concern in the Bay Area are ground-level ozone and very small particulate matter (referred to as PM₁₀). The Bay Area is considered to be a non-attainment area for ground-level ozone according to both State and federal standards and non-attainment for State PM₁₀ standards, since some stations in the region exceed the ambient air quality standards. The Bay Area is currently in compliance with State and federal standards for all other air pollutants, which include carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and lead (Pb).

The EPA has established National Ambient Air Quality Standards (NAAQS) in response to the Clean Air Act. It requires the State to prepare a State Implementation Plan for each criteria air pollutant that the NAAQS has not attained. The Bay Area has not attained the NAAQS for ground level ozone. The State Implementation Plan or SIP is comprised of plans submitted by different air quality management districts. In addition, the California Clean Air Act requires the districts to submit plans that address attainment of the State's more stringent ground-level ozone standard. As a result, the BAAQMD has prepared and implements specific plans to meet the applicable laws, regulations, and programs.

In formulating compliance strategies, the BAAQMD relies on population and employment projections made by the Association of Bay Area Governments (ABAG) and vehicle miles traveled projections made by the Metropolitan Transportation Commission (MTC). These projections are based on planned land uses established through General Plans of local jurisdictions within District boundaries. Land use patterns influence transportation needs, and motor vehicles are the primary source of air pollution in the District.

1. *Would the project conflict with or obstruct implementation of the applicable air quality plan?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The 2000 Bay Area Clean Air Plan is the BAAQMD's most comprehensive strategy to reduce air pollutant emissions so that the region can eventually be brought into attainment of ambient air quality standards. The Clean Air Plan uses population and regional travel forecast projections to update emission inventory projections. Control measures to reduce the future emissions inventory are then developed. The Clean Air Plan includes twenty TCMs that would reduce future air pollutant emissions. Cities and counties are identified as the implementing agencies for seven of the TCMs. Cities and counties generally implement the TCMs through their general plans.

Development within the SOI areas, either within the city or county, will affect regional air quality. The change in the SOI would not directly lead to air quality impacts but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus a similar level of air quality impacts would be expected. Air quality impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

2. *Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Future development within the SOI areas may violate air quality standards or contribute to existing or projected violations. The change in the SOI would not directly lead to such an impact but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus would result in similar air quality impacts. A quantified analysis of the air quality impacts is usually conducted at the time a project is proposed. Air quality impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

3. *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The Bay Area does not meet ambient air quality standards for ground level ozone and PM₁₀. Ground level ozone is a regional air pollutant that is affected by emissions of precursor air pollutants (i.e., reactive organic gases and nitrogen oxides) throughout the region. PM₁₀ is primarily made up of both local emissions and regional emissions. The region has attained all other State and federal air quality standards. The *BAAQMD CEQA Guidelines* identify thresholds of significance for assessing total emissions from project operations. Future development within the SOI areas may exceed BAAQMD thresholds. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction, thus the proposed SOI changes would not result in any impact. A quantified analysis of the air quality impacts, including PM₁₀, is usually conducted at the time a project is proposed. Air quality impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

4. *Would the project expose sensitive receptors to substantial pollutant concentrations?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The BAAQMD defines sensitive receptors as facilities where sensitive receptor groups (children, the elderly, the acutely ill, and the chronically ill) are likely to be located. Such uses include homes, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics. Sensitive receptors located near the SOI areas include both existing residential uses and a school under construction. Construction emissions from future development of the four SOI areas could affect sensitive receptors. Uncontrolled grading activities associated with construction can generate dust which can expose adjacent receptors to elevated levels of PM₁₀.

The BAAQMD does not normally consider construction activities to result in significant air quality impacts when feasible PM₁₀ control measures are implemented. Such measures can reduce these construction period impacts to less-than-significant levels by adding notes to construction documents which require contractors to carry out air quality measures such as those listed below.

- All active construction areas shall be watered at least twice daily and more often during windy periods to avoid visible dust plumes.
- All hauling trucks shall be covered, or at least two feet of freeboard shall be maintained. Dust-proof chutes shall be used as appropriate to load debris onto trucks during demolition.
- Until paved, all unpaved access roads, parking areas, and staging areas shall be watered at least twice daily, or non-toxic soil stabilizers shall be applied.
- All paved access roads or driveways, parking areas, or staging areas shall be swept daily (with water sweepers), and, if visible soil material is deposited on the adjacent roads, those streets shall be swept daily (with water sweepers).
- Inactive construction areas (such as previously-graded areas which are inactive for ten days or more) shall be hydroseeded, or non-toxic soil stabilizers shall be applied.
- Exposed stockpiles shall be enclosed, covered, watered twice daily, or have non-toxic soil binders applied.
- Traffic speeds on any unpaved roads shall be limited to 15 miles per hour (mph).
- Vegetation shall be replanted in disturbed areas as quickly as possible. Until vegetation is planted, these areas shall be kept damp.
- Any activities which cause visible dust plumes but cannot be controlled by watering shall be suspended.

If implementation of such measures as listed above does not occur, impacts from construction on air quality could be significant. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus would result in similar air quality impacts. Thus the project (changes to the American Canyon SOI) would not result in a significant impact. Construction-generated air quality impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

5. *Would the project create objectionable odors affecting a substantial number of people?*

- | | | | |
|--|--|---|--|
| <input type="checkbox"/> Potentially
Significant Impact | <input type="checkbox"/> Less-Than-Significant With
Incorporation of Mitigation | <input type="checkbox"/> Less-Than-
Significant Impact | <input checked="" type="checkbox"/> No
Impact |
|--|--|---|--|

The *BAAQMD CEQA Guidelines* provide examples of land uses that represent potential sources of objectionable odors. They include asphalt batch plants, chemical manufacturing and fiberglass manufacturing facilities, coffee roasters, composting facilities, painting and

coating operations (auto body shops), petroleum refineries, rendering plants, sanitary landfills, transfer stations, and wastewater treatment plants. It is unknown at this time whether any of the potential uses on the four SOI areas would emit odors. As discussed above, no direct air quality impacts would result from the proposed SOI changes but could indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. During future project review, the impact of odors to nearby sites would require evaluation. Air quality impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

Air Quality Conclusion The proposed changes to the American Canyon SOI would result in no significant impacts on air quality.

D. Biological Resources

Background and Methodology Identification of the biological resources occurring in the study area involved a preliminary literature review and a field reconnaissance. Available literature and resource mapping was reviewed to provide information on general resources, location of known wetland resources, and the distribution of special-status species and sensitive natural communities which have been recorded from the southern Napa County vicinity. Literature and mapping reviewed included: the California Native Plant Society (CNPS) *Inventory of Rare and Endangered Vascular Plants of California*³, the *Guide to California Wildlife Habitat Relationship System* and Volumes I, II, and III of California's Wildlife⁴, the California Department of Fish and Game's (CDFG) list of special animals and plants⁵, and a record search conducted by the California Natural Diversity Data Base (CNDDB) of information on file with the CDFG.

Identification of the biological resources within the SOI areas was based primarily on existing information, and no detailed field surveys were conducted as part of this assessment. A field reconnaissance of the four study area vicinities was conducted on September 12, 2003 to provide a preliminary understanding of vegetation and wildlife habitat types, and possible presence of significant biological and wetland features. Detailed surveys would be necessary to provide a conclusive determination on the presence of special-status species and wetlands where future development is proposed on vacant lands within the study area.

A detailed explanation of the regulatory framework which pertains to biological resources is provided in Appendix 1.

Vegetation and Wildlife Habitat Natural communities in the vicinity of American Canyon are dominated by non-native grassland, with smaller areas of riparian scrub and woodland along the few creeks and drainages, and coastal saltmarsh at the western edge along the fringe of the Napa River

3 *Inventory of Rare and Endangered Vascular Plants of California*, Special Publication No. 1 (6th Edition), California Native Plant Society, 2001.

4 *Guide to California Wildlife Habitat Relationship Systems*, California Department of Fish and Game, prepared by Jones & Stokes Associates, 1988, and *Volume I Amphibians and Reptiles*, 1988, *Volume II Birds*, 1990, and *Volume III Mammals*, 1990.

5 *Special Plants and Animals Lists*, California Natural Diversity Data Base, California Department of Fish and Game, 2003.

floodplain. Grasslands have historically been grazed by livestock, which continues today around the fringe of the study area. Most of the natural habitat has been altered by historic grazing, dryland farming, and more recently by conversion to vineyards and urbanization. Urbanized areas support a cover of non-native landscaping, with the American Canyon Creek corridor forming the only remaining native vegetation and wildlife habitat through the center of American Canyon.

The vegetative cover in the four proposed SOI expansion areas are generally dominated by non-native grasslands and ornamental landscaping, supporting wildlife common to grasslands and urbanized habitat. Vegetative cover in each of the four proposed expansion areas is summarized as follows:

- Much of the Watson Lane (Area 2) and portions of the Green Island Road (Area 3) areas are developed with industrial, commercial, and residential uses, with structures, parking lots and driveways, and limited landscaping. Non-native grassland occurs in vacant areas and the larger undeveloped parcels north of Green Island Road. The upper reaches of the North Slough pass through the Watson Lane area, supporting freshwater marsh and limited riparian scrub vegetation.
- The American Canyon Road/Flosden Road Intersection area (Area 1) supports a cover of non-native grassland, with dense riparian scrub occurring along the American Canyon Creek corridor at the southern edge.
- The Eucalyptus grove area (Area 4) is dominated by planted woodlots of introduced blue gum (*Eucalyptus globulus*), with an understory of primarily non-native grassland. Wetland vegetation and limited riparian cover occurs along the North Slough where it passes through the Eucalyptus grove area, and well-developed coastal salt marsh and brackish marsh occurs immediately to the west.

Non-Native Grasslands The non-native grasslands are composed of introduced grasses and broadleaf weedy species which quickly recolonize disturbed areas. Intensive grazing, dryland farming, and other disturbance have eliminated most of the native grasslands throughout California over the past 100 years, including the south Napa County area. Common species in the grasslands today include: wild oat (*Avena* sp.), brome (*Bromus* sp.), field mustard (*Brassica campestris*), wild radish (*Rhaphanus sativus*), bindweed (*Convolvulus arvensis*), bur clover (*Medicago polymorpha*), and yellow-star thistle (*Centaurea solstitialis*). The remaining native species appear to be common perennials, such as California poppy (*Eschscholzia californica*) and soap plant (*Chlorogalum* sp.).

Grasslands support a variety of mammals, birds, and reptiles, and provide foraging habitat for raptors. Many species use the grassland for only part of their habitat requirements, foraging in the grassland and seeking cover in the limited tree and scrub cover. Grassland cover provides foraging, nesting, and denning opportunities for resident species such as western fence lizard, northern alligator lizard, gopher snake, western meadowlark, goldfinch, ring-necked pheasant, red-winged blackbird, California ground squirrel, California vole, Bottae pocket gopher, black-tailed jackrabbit, and occasionally black-tailed deer. The rodent, bird, and reptile populations offer foraging opportunities for avian predators such as black-shouldered kite, northern harrier, American kestrel, red-tailed hawk, golden eagle, barn owl, and great horned owl. Mammalian predators which utilize the grasslands include gray fox, long-tailed weasel, bobcat, and mountain lion. Most of the predatory mammals require relatively undisturbed habitat for foraging, and it is unlikely that the proposed expanded SOI areas provide important habitat for these species.

Freshwater Marsh and Riparian Riparian vegetation occurs along American Canyon Creek and the North Slough. Vegetation along American Canyon Creek and segments of the North Slough forms a dense cover of riparian scrub and woodland, dominated by native trees and shrubs such as willow (*Salix* spp.), coast live oak (*Quercus agrifolia*), and California buckeye (*Aesculus californica*), with dense thickets of Himalayan blackberry (*Rubus discolor*) and wild rose (*Rosa californica*) in the understory and fringe of the corridor. Segments of the creeks support freshwater marsh vegetation, dominated by narrow-leaf cattail (*Typha angustifolia*), together with several other wetland indicator species such as curly dock (*Rumex crispus*), bristly ox-tongue (*Picris echioides*), and wild celery (*Apium graveolens*).

Freshwater aquatic habitats and the associated riparian and marsh vegetation are of high value to wildlife, providing a source of drinking water, protective cover, and serving as movement corridors. Riparian woodland and scrub provides nesting and roosting substrate for numerous species of resident birds, and stopovers for migrant songbirds. The creeks and other wetlands provide aquatic habitat for amphibians, such as Pacific tree frog, California newt, western toad, California slender salamander, and possibly the federally-threatened California red-legged frog, together with large populations of invertebrates. Wildlife commonly associated with dense woodland and scrub habitat include: dusky-footed woodrat, deer mouse, western flycatcher, chestnut-backed chickadee, plain titmouse, Hutton vireo, orange-crowned kinglet, rufous-sided towhee, fox sparrow, bushtit, ringneck snake, California newt, and California slender salamander. Dead limbs and cavities in older trees are often used for nesting or denning. Dense riparian growth provides essential cover in the open grasslands for larger mammals, such as striped skunk, raccoon, opossum, black-tailed deer and predatory species as they forage throughout their range.

Developed Areas Ornamental landscaping has been planted in some locations as part of existing development. Most species used in landscaping are non-native ornamentals, consisting of a wide variety of tree, shrub, groundcover, and turf species. Ruderal grasslands occur where turf and dense landscaping is absent.

In general, developed areas have low to poor wildlife habitat value due to replacement of natural communities, fragmentation of remaining undeveloped land, and intensive human disturbance. The diversity of urban wildlife depends on the extent and type of landscaping and remaining open space, as well as the proximity to natural habitat. Trees and shrubs used for landscaping provide nest sites and cover for wildlife adapted to developed areas. Common species include: mourning dove, scrub jay, northern mockingbird, American robin, rock dove, European starling, and house sparrow. Developed areas also provide habitat for several species of native mammals such as California ground squirrel, raccoon, and striped skunk, as well as the introduced eastern fox squirrel. Introduced pest species such as Norway rat, house mouse, and opossum also tend to be common in developed areas.

Special-Status Species A record search conducted by the CNDDB, together with other relevant information, indicates that occurrences of several plant and animal species with special-status have been recorded from or are suspected to occur in the American Canyon vicinity of Napa County. Exhibits 5 and 6 provide a preliminary list of special-status plant and animal species considered to have the highest likelihood of occurrence in the American Canyon vicinity. Further refinement of available information and conduct of detailed surveys would be necessary to conclusively determine the extent of essential habitat for special-status species on the remaining undeveloped parcels in the proposed expansion areas.

The extent of past disturbance limits the likelihood of occurrence of special-status species within most of the four proposed expansion areas. The only occurrence of a special-status species reported

by the CNDDB within the proposed SOI expansion area is a population of the federally-endangered showy indian clover reported in 1952 from Napa Junction within the Watson Lane area. This species has not been found again in the area despite attempts to relocate it during surveys conducted in 1979. Other species reported from the general vicinity of the American Canyon SOI expansion areas include: occurrences of steelhead reported from the North Slough near Eucalyptus Drive and the mouth of American Canyon Creek; California red-legged frog known from the American Canyon Creek just east of Flosden Road; an occurrence of vernal pool fairy shrimp known from a pool at the south end of the Napa Airport; a former occurrence of burrowing owl reported in 1979 near Susan Road, but subsequently eliminated by development; several populations of big-scale balsamroot known from the grasslands in the eastern foothills of American Canyon; several colonies of Tiburon indian paintbrush known from the serpentine grasslands in the quarry area north of American Canyon Road and east of Flosden Road; and a population of alkali milk-vetch reported in 1993 from American Canyon Creek about 1.2 miles upstream of Slaughterhouse Point. Numerous occurrences of special-status plant and animal species associated with coastal salt marsh and brackish marsh has also been reported from the extensive marshlands along the Napa River corridor, including salt marsh harvest mouse, Suisun shrew, California clapper rail, California black rail, salt marsh common yellowthroat, Marin knotweed, legenere, San Joaquin saltbush, Delta tule pea, and Suisun marsh aster.

Sensitive Natural Communities Due to the extent of past agricultural practices and urban development, sensitive natural communities are largely absent within the proposed SOI expansion areas. The Riparian scrub and freshwater marsh along American Canyon Creek and the North Slough should be considered sensitive, as both wetlands and important habitat for wildlife. The extensive coastal salt marsh and brackish marsh along the Napa River corridor are also important sensitive natural communities as mapped by the CNDDB, but they are outside the proposed expansion areas. There is a possibility that vernal pools or other seasonal wetlands occur in the remaining grasslands on undeveloped parcels, and these may be considered sensitive natural communities. Further detailed surveys would be required to confirm presence or absence of these sensitive natural community types in the remaining grasslands.

Wetlands Although no wetland assessment has been prepared, indicators were observed along the rail corridors and have been mapped as part of the NWI. Detailed wetland delineations would be necessary to accurately determine the extent of jurisdictional wetlands and unvegetated other waters.

Known wetlands within the proposed expansion areas include American Canyon Creek in the American Canyon Road/Flosden Road Intersection area (Area 1) and North Slough which pass through the Eucalyptus Drive (Area 4) and Watson Lane areas (Area 2). Extensive salt marsh and brackish water wetlands occur along the southwest side of Green Island Road (Area 3) in the salt ponds at the western edge of the Green Island Road area and just west of the Eucalyptus Drive area. There remains a potential for scattered seasonal wetlands, vernal pools and smaller drainage swales or channels to occur on portions of the remaining undeveloped parcels in each of the proposed expansion areas.

**EXHIBIT 5
PARTIAL LIST OF
SPECIAL-STATUS PLANT SPECIES WHICH COULD OCCUR IN THE AMERICAN CANYON VICINITY**

Taxa Name	Status (Fed/State/CNPS)	Habitat Characteristics	Distribution (Presumed Extirpated)	Flowering Period
<i>Aster lentus</i> Suisun marsh aster	-/-/1B	Brackish water marshes and swamps	Contra Costa, Napa, Sacramento, Solano	May-October
<i>Astragalus tener</i> var. <i>tener</i> Alkali milk-vetch	-/-/1B	Valley grassland, vernal pools, and playas	Merced, Solano, Yolo (Alameda, Contra Costa, Monterey, Napa, Santa Barbara, Santa Clara, San Francisco, San Joaquin, Stanislaus)	March-June
<i>Atriplex joaquiniana</i> San Joaquin saltbrush	-/-/1B	Alkaline grassland and scrub	Alameda, Contra Costa, Colusa, Glenn, Merced, Napa, Sacramento, Santa Barbara, Yolo (Santa Clara, San Joaquin, Solano, Tulare)	April-Sept.
<i>Cordylanthus mollis</i> ssp. <i>mollis</i> Soft bird's-beak	FE/SR/1B	Coastal salt marsh	Contra Costa, Marin, Napa, Solano	July-Nov.
<i>Downingia pusilla</i> Dwarf downingia	-/-/2	Vernal pools and grassland	Mariposa, Merced, Napa, Placer, Sacramento, Solano, Sonoma, Stanislaus, Tehama, South America	March-May
<i>Fritillaria pluriflora</i> Adobe fritillaria	-/-/1B	Chaparral, woodland, grassland on adobe soil	Butte, Colusa, Glenn, Lake, Napa, Plumas, Solano, Tehama, Yolo Mendocino, Monterey, San Benito	February-April
<i>Fritillaria liliacea</i> Fragrant fritillary	-/-/1B	Coastal scrub and grassland often	Alameda, Contra Costa, Monterey, Napa, San Benito, Santa Clara, San Francisco, San Mateo, Solano, Sonoma	February-April
<i>Lasthenia conjugens</i> Contra Costa goldfield	FE/-/1B	Low flats and borders of vernal pools	Napa, Solano, (Alameda, Contra Costa, Mendocino, Santa Barbara, Santa Clara)	April-May
<i>Lathyrus jepsonii</i> ssp. <i>jepsonii</i> Delta tule pea	-/-/1B	Brackish water marshes and swamps	Alameda, Contra Costa, Fresno, Napa, San Benito, Santa Clara, San Joaquin, Solano	May-June
<i>Legenere limosa</i> Legenere	-/-/1B	Vernal pools	Lake, Napa, Placer, Sacramento, San Mateo, Solano, Tehama (Sonoma, Stanislaus)	May-June
<i>Lilaeopsis masonii</i> Mason's lilaeopsis	-/SR/1B	Brackish water marshes and swamps	Contra Costa, Napa, Sacramento, San Joaquin, Solano	June-August
<i>Polygonum marinense</i> Marin knotweed	-/-/1B	Coastal salt marsh	Marin, Napa, Sonoma	June-August

EXHIBIT 5 SPECIAL STATUS PLANT SPECIES -- CONTINUED

Taxa Name	Status (Fed/State/CNPS)	Habitat Characteristics	Distribution (Presumed Extirpated)	Flowering Period
<i>Trifolium amoenum</i> Showy Indian clover	FE/-/IB	Valley grassland	Sonoma (Alameda, Mendocino, Marin, Napa, Santa Clara, Solano)	April-June

Federal Status:

FE = Listed as "endangered" under the Federal Endangered Species Act.

State Status:

SE = Listed as "endangered" under CESA. Taxa in serious danger of becoming extinct throughout all or significant portion of range due to varying factors.

SR = Listed as "rare" under CESA. Although not presently threatened with extinction, may become endangered if present environmental factors worsen.

CNPS Status:

1A = Plants of highest priority; plants presumed extinct in California.

1B = Plants of highest priority; plants rare and endangered in California and elsewhere.

2 = Plants rare, threatened, or endangered in California; more common elsewhere.

EXHIBIT 6
PARTIAL LIST OF
SPECIAL-STATUS ANIMAL SPECIES WHICH COULD OCCUR IN THE
AMERICAN CANYON VICINITY

Species	Status Federal/State	Preferred Habitat Type
<u>Invertebrates:</u> Callippe silverspot butterfly California freshwater shrimp	FE/- FE/SE	Open grasslands with golden violet host species Permanent streams with pools
<u>Amphibians/Reptiles/Fish:</u> California tiger salamander California red-legged frog Delta smelt Foothill yellow-legged frog Sacramento splittail Northwestern pond turtle Steelhead Winter- run chinook salmon	C/CSC, CP FT/CSC, CP FT/ST FSC/CSC, CP PT/CSC FSC/CSC, CP FT/- FE/SE	Vernal pools, ponds, streams and adjacent grassland Ponds, streams, adjacent riparian and upland Brackish zone of Delta; adjacent freshwater zones for spawning Permanent streams with cobbles Sloughs and other slow-moving waters of Delta Pond, rivers, and streams Open water of Bay and Delta, tributary rivers and streams Open water of Bay and Delta, tributary rivers and streams
<u>Birds:</u> White-tailed kite Burrowing owl California black rail California clapper rail Cooper's hawk Double-crested cormorant Golden eagle Northern harrier Northern spotted owl Peregrine falcon Prairie falcon Salt marsh yellowthroat Sharp-shinned hawk Suisun song sparrow Tricolored blackbird	-/CP FSC/CSC FSC/ST, FP FE/SE -/CSC -/CSC -/CSC,CP -/CSC FT/- Delisted/SE,CP -/CSC FSC/- -/CSC FSC/CSC FSC/CSC	Grassland Grassland Salt marsh Salt marsh Riparian and grassland Bays, rivers and lakes (communal roosts protected) Open grassland and savanna Grassland Dense woodland and forest Open water and grassland Grassland Salt and brackish water marsh Riparian and grassland Salt and brackish water marsh Freshwater marsh and fields
<u>Mammals:</u> American badger Salt marsh harvest mouse Suisun shrew	-/- FE/SE FSC/CSC	Grassland Salt marsh and adjacent grassland Salt marsh

Federal Status:

FE = Listed as "endangered" under the FESA.

FT = Listed as "threatened" under the FESA.

C = A candidate species under review for federal listing. Includes species for which the USFWS currently has sufficient biological information to support listing endangered or threatened.

FSC = Federal Special Concern species.

State Status:

SE = Listed as "endangered" under CESA.

ST = Listed as "threatened" under CESA.

CP = California fully protected or protected species; individual may not be possessed or taken at any time.

CSC = California Special Concern species by the CDFG; taxa have no formal legal protection but nest sites and communal roosts are generally recognized as significant biotic features.

1. *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California of Fish and Game or U.S. Fish and Wildlife Service?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The proposed SOI changes would not directly affect any populations of special-status species but may indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. Future development could result in the elimination of essential habitat for special-status animal species such as California red-legged frog, steelhead, and several species of raptors, or eliminate populations of special-status plant species such as showy indian clover, alkali milk-vetch, or Contra Costa goldfields if they occur on the remaining undeveloped parcels. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus would result in similar impacts to populations of special-status species. Further detailed surveys would be necessary to confirm the presence or absence of populations or essential habitat in the SOI areas, and to define adequate protection or appropriate mitigation if avoidance is not feasible. Such impacts will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

2. *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The proposed SOI expansion would not directly affect any sensitive natural communities but may indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. Future development could affect remnant sensitive natural communities such as the American Canyon Creek and North Slough corridors, and possibly vernal pool and seasonal wetland communities, if present on the remaining undeveloped parcels. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus would result in similar impacts to sensitive natural communities. Implementation of biological and wetlands assessments would reduce this impact. Such impacts will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

3. *Would the project have a substantial adverse effect on Federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Potential impacts on wetlands include direct loss through development and the secondary effects of grading and sedimentation on the stream and downgradient watershed. Although a detailed

wetland delineation has not been prepared for the four SOI areas, jurisdictional habitat is known to occur on the subject sites. Known wetlands within the proposed expansion areas include American Canyon Creek in the American Canyon Road/Flosden Road Intersection area (Area 1) and the North Slough which pass through the Eucalyptus Drive (Area 4) and Watson Lane areas (Area 2). Extensive salt marsh and brackish water wetlands occur along the southwest side of Green Island Road (Area 3) in the salt ponds at the western edge of the Green Island Road area and just west of the Eucalyptus Drive area. There remains a potential for scattered seasonal wetlands, vernal pools and smaller drainage swales or channels to occur on portions of the remaining undeveloped parcels in each of the proposed expansion areas.

Future development could result in the elimination or modification of known and currently unknown wetlands, including creek corridors and possibly seasonal wetlands. Of particular concern are the riparian corridors along American Canyon Creek and North Slough, and the potential for seasonal wetlands and vernal pools in the remaining undeveloped grasslands in the area. Indirect impacts to wetlands could include potential erosion and siltation of the freshwater marsh and riparian habitat along American Canyon Creek and the North Slough. Soils exposed during grading and construction would contribute to increased sediment loads if adequate erosion control measures are not implemented. Increased urban pollutants, such as petroleum products from automobiles, and fertilizers, herbicides, and pesticides associated with landscape maintenance may contribute to long-term degradation of water quality.

The proposed SOI changes would not directly affect any jurisdictional wetlands but may indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus would result in similar impacts to wetlands. Such impacts will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage. In addition, implementation of *American Canyon General Plan* Policies 5.10.16 through 5.10.18, 5.12.1 through 5.12.3, 5.13.1, 5.13.2, 8.7.1, 8.7.2, 8.8.1, 8.9.1 through 8.9.3, and 8.14.1 through 8.14.5 would reduce impacts on water resources.

4. *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native nursery sites?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

As discussed above, riparian streams and locations with expansive marsh vegetation, and other remnant native habitat serve as movement corridors and potential breeding locations for native and migratory wildlife species. The proposed SOI changes would not directly affect any native wildlife habitat but may indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus would result in similar impacts to movement corridors and potential breeding locations. Conduct of a site assessment and avoidance of any riparian corridors, marshland, and other sensitive wildlife habitat would protect the value of these features to wildlife. Such impacts will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

5. *Would the project conflict with any local policies or ordinances protecting biological resources (such as a tree preservation policy or ordinance)?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The project as proposed would not conflict with relevant goals and policies of the *Napa County General Plan* or the *American Canyon General Plan*. These relate primarily to protection of sensitive biological and wetland resources, which would be identified as part of further environmental review of specific development proposals in the expanded SOI areas.

6. *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The proposed project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved conservation plan. No conservation plans have been adopted for lands encompassing the site or surrounding lands, and no adverse affects are anticipated.

Biological Resources Conclusion The project would result in no significant impacts on biological resources.

- E. Cultural Resources** According to the *American Canyon Technical Background Report*, there are four recorded prehistoric sites within the City of American Canyon. The potential presence of other archaeological sites is considered greatest in areas near watercourses, at the base of hills along watercourses, and along marsh margins. Specifically, Suscol Creek, other intermittent streams such Fagan and Sheehy Creeks, the 20-foot contour elevation at the edge of the Napa River floodplain, sandstone, basaltic, and other rock outcroppings, alluvial deposits, and seasonal wetlands have the potential to support archaeological resources.

According to the background report, there are no listed State and federal inventories of historic properties within the American Canyon planning area. Unidentified historic properties may be present in the area, including structures more than 45 years old, stone or adobe foundations or walls, structures or remains with square nails, refuse deposits, and old wells or privies. According to the background report, specific historic resources in the planning area include: the old route of the Napa-Vallejo (or Benicia-Sacramento) Road and other known wagon trails; the route of the Southern Pacific and Electric Railroad Lines from the Napa River bridge crossing to Napa Junction; historic farmsteads associated with major roads and trails; and areas where locally important minerals could be obtained.

An archeological records review by the California Historical Resources Information System (CHRIS) at Sonoma State University was conducted for the four planning areas. According to the review there are two recorded historic-period archaeological resources listed with the CHRIS on SOI Areas 2 and 4; 12 archaeological studies have been conducted within portions of the four SOI areas; and there are no listed State and federal inventories of historic properties within the four SOI sites. The records search concluded there is a high possibility of identifying Native American and historic-period archaeological resources in the project areas and recommended further archival and field studies be performed.

1. *Would the project cause a substantial adverse change in the significance of an historic resource as defined in Section 15064.5?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

As stated above, there are no listed State and federal inventories of historic properties within the four SOI areas; however, there are two recorded historic-period archaeological resources listed with the CHRIS on SOI Areas 2 and 4. The CHRIS records search concluded there is a high possibility of identifying additional historic-period archaeological resources in the project areas and recommended further archival and field studies be performed. Historical properties may be present but may not have been discovered. It is difficult to anticipate where historic sites may occur within the SOI areas; however, according to the *American Canyon Technical Background Report*, the route of the Southern Pacific and Electric Railroad Lines from the Napa River bridge crossing to Napa Junction, which traverses SOI Area 3, is considered a historical resource.

The change in the SOI would not directly lead to impacts on cultural resources but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus the potential for impacts would be expected with development under either jurisdiction. Impacts on cultural resources associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the

rezoning stage prior to annexation or at the project approval stage. In addition, policies contained in the *American Canyon General Plan* represent a variety of measures that will assist in reducing potential impacts to cultural resources. Specifically, Policies 8.19.1 through 8.21.2 address the protection of the city's cultural resources, recommending a city-wide cultural resource survey and policies to promote historic preservation.

2. *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Based upon information from the *American Canyon General Plan EIR* and the CHRIS records survey, there is the possibility that archaeological resources could occur in all of the SOI areas. Figure CH-1 in the *American Canyon General Plan EIR* indicates that all or part of each of the SOI areas should be considered Archaeologically Sensitive. Archaeological impacts would primarily occur during the excavation and grading process, as well as during the installation of infrastructure. Buildout of the project areas may generate potentially significant impacts to archaeological resources as a result of development. It is difficult to anticipate where historic sites may occur within the SOI areas.

The change in the SOI would not directly lead to impacts on archaeological resources but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction. Impacts on archaeological resources associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

3. *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Based upon information from the *American Canyon Technical Background Report*, there are unique geologic features that could occur in the SOI areas, such as rock outcroppings or locally important minerals including "Napa stone," rhyolite, and other volcanic materials. Impacts to these resources would primarily occur during the excavation and grading process, as well as during the installation of infrastructure. Buildout of the project areas may generate potentially significant impacts to these resources as a result of development. However, as shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction. The change in the SOI would not directly lead to impacts on paleontological resources but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. Impacts on cultural resources associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

4. *Would the project disturb any human remains, including those interred outside of formal cemeteries?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Same as E.1 (above).

Cultural Resources Conclusion The proposed changes to the American Canyon SOI would result in no impacts to cultural resources.

F. Geology and Soils

Background and Methodology The geologic and soils' conditions at the four sites were determined by reviewing available information in the *American Canyon General Plan*, the *American Canyon General Plan EIR*, *American Canyon Technical Background Report*, and the *Napa County General Plan*.

Geology and Soils Setting Both the City of American Canyon and the four SOI areas are set within the central portion of the Coast Ranges Geomorphic province. The San Andreas, Rodgers Creek, and Hayward faults are the known regional hazards that pose the most significant seismic threat to the four SOI areas. Additionally, several smaller local faults have been mapped within the area, such as the West Napa fault, the Green Valley fault, and the Concord fault. The West Napa fault has been identified as an Alquist-Priolo Special Study Zone that extends diagonally from the southeast end of the city through the Napa airport. The fault and the Alquist-Priolo Special Study Zone extend through part of SOI Area 3. Due to the proximity of the site to these known active faults, any future development would be exposed to moderate to strong ground shaking. Additionally, there are likely several unidentified (hidden) faults that run through this region, thus the risk of exposure increases as the population increases.

Other local hazards include landslides and liquefaction. Landslides would be unlikely in any of the four SOI areas due to their relatively flat topography and soil types. Liquefaction hazards are low in all of SOI Areas 1, 2, and 3, and most of SOI Area 4. The *American Canyon General Plan EIR* Figure G-1 indicates that part of the western half of SOI Area 4 is underlain by soils that may be susceptible to liquefaction. (This portion of the SOI area is currently partially developed with the American Canyon Wastewater Treatment Plant).

Regulatory Background California's Alquist-Priolo Earthquake Fault Zoning Act (California Public Resources Code Section 2621 *et seq.*) was originally enacted in 1972 as the Alquist-Priolo Special Studies Zones Act and was renamed in 1994. The Alquist-Priolo Act prohibits the location across the traces of active faults of most types of structures intended for human occupancy and strictly regulates construction in the corridors along active faults (earthquake fault zones). The Act is intended to reduce the hazard to life and property from surface fault ruptures during earthquakes.

Intended to reduce damage resulting from earthquakes, the Seismic Hazards Mapping Act of 1990 (California Public Resource Code Sections 2690–2699.6) is similar to the Alquist-Priolo Act. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are conceptually similar to those of the Alquist-Priolo Act. The state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development in mapped seismic hazard zones.

Permit review is the primary method for local regulation of development under the Seismic Hazards Mapping Act. More specifically, cities and counties are prohibited from issuing development permits for sites in seismic hazard zones until appropriate site-specific geologic and/or soils investigations have been carried out and measures to reduce potential damage have been incorporated into the development plans.

Construction activities are regulated by local jurisdictions through a multistage permitting process. Construction permitting is overseen by the immediate local jurisdiction. Projects proposed for unincorporated lands require county permits; projects in incorporated areas (within city limits) usually require only city permit review. Grading and building permit applications both require completion of a site-specific geotechnical evaluation overseen by a state-certified engineering geologist and/or geotechnical engineer.

1. *Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*

a. *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The West Napa fault, which runs through SOI Area 3, has been delineated as an Alquist-Priolo Special Study Zone. No other known faults cross the SOI areas. Within this zone, development of habitable structures is prohibited. Because Area 3 is located in an Alquist-Priolo Earthquake Fault Zone, surface fault rupture represents a potentially significant impact. In order to avoid this impact, it is necessary to undertake site- and project-specific active fault explorations to determine the most likely location of the most recent active and potentially active faulting and to establish setbacks from the zone of faulting.

The change in the SOI would not directly lead to impacts associated with fault rupture but would indirectly lead to such impacts should Area 3 be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land use in SOI Area 3 is similar whether under county or city jurisdiction and thus the potential for impact is the same. Fault rupture impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage. Policies 9.1.1 through 9.1.3 of the *American Canyon General Plan*, require site-specific investigations and development restrictions within the special study zone.

b. *Strong seismic ground shaking?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Due to the proximity of several major and minor faults, as well as the possibility of other, undetected faults, all of the four SOI areas would experience strong seismic shaking. As noted in the *American Canyon General Plan EIR*, expected levels of ground acceleration and intensity of shaking are within those normally governed by Uniform Building Code Standards. The change in the SOI would not directly lead to impacts associated with strong seismic shaking, but would indirectly lead to such impacts should the areas be annexed to the City of

American Canyon and development occur. Buildout of the SOI areas under the *Napa County General Plan* or the *American Canyon General Plan* would expose additional city residents and employees to the risk of ground shaking. Development designed in accordance with current Uniform Building Code seismic safety requirements, as required by Policies 9.2.1 and 9.2.2 of the *American Canyon General Plan*, would reduce the hazard of seismic ground shaking. Site and project-specific geotechnical investigations would identify performance standards to incorporate in foundation and structural design and construction. Using these factors, the future development can be designed to reduce the hazard of seismic ground shaking. Potential impacts associated with strong seismic shaking will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

c. *Seismic-related ground failure, including liquefaction?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Seismically induced ground failures include liquefaction (including lateral spreading and lurching) and compaction settlement.

Liquefaction may occur in saturated, loose, clean, granular soils when they are subjected to severe ground shaking. Ground lurching is a related phenomenon, occurring as a result of an earthquake, in which soft saturated ground is thrown into undulating waves that may or may not remain when the ground motion ceases. Another related phenomenon is lateral spreading, a situation in which a layer of soils, typically not the surface layer, is subject to liquefaction. Most of the SOI areas are located on alluvial formations that are considered to have low liquefaction potential, with a small portion of SOI Areas 1 and 3 on bedrock formations that have no liquefaction potential. However, part of the western half of SOI Area 4 is located on alluvial formations that are considered to have high liquefaction potential.

Compaction settlement is a phenomenon which typically occurs in loose dry soils, such as fills or alluvium. Because of the depth and conformation of alluvium in Napa Valley, land subsidence is likely to be restricted to instant compaction of sands (liquefaction), or the long-term compaction and plastic flow of thick, water-saturated mud, for example, in the marshlands. Portions of SOI Areas 3 and 4 are located on historic marshlands, therefore increasing the risk of settlement.

The change in the SOI would not directly lead to impacts associated with seismic-related ground failure but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in the SOI areas are similar whether under county or city jurisdiction and thus the potential for impact is the same in both jurisdictions. Foundation type, structural design, and construction techniques in conformance with current UBC standards based on the recommendations made by a geotechnical investigation would reduce potentially adverse seismic-related settlement impacts. Potential impacts associated with seismic-related ground failure will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage. American Canyon General Plan Policies 9.3.1 through 9.3.5 require studies to be completed in areas known to have potential liquefaction hazards prior to individual project permit approval.

d. *Landslides?*

- ☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The *American Canyon General Plan EIR* Figure G-2 identifies general areas within the city and planning area which are subject to landslides. None of the four proposed SOI expansion areas are identified as being subject to landslides on this map. Additionally, the SOI site slopes are generally flat or slightly sloped, except for the northeastern corner of Area 1 which has some slopes of up to 15 percent. None of the four proposed SOI expansion areas are expected to experience slope instability or landsliding. Further, implementation of General Plan policies 9.4.1, through 9.4.9 would assure adequate assessment and mitigation of potential landslide hazards in future development proposals on incorporated land.

2. *Would the project result in substantial soil erosion or the loss of topsoil?*

- ☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Soil erosion and the loss of topsoil is a potentially significant impact in the SOI expansion areas. The change in the SOI would not directly lead to impacts associated with soil erosion but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. The *American Canyon General Plan* identifies loss of soil from wind exposure and erosion as an issue area. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus the potential for impact is the same in both jurisdictions. Potential soil erosion impacts associated with new development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage. Policies 5.13.1, 5.13.2, 8.8.1, 8.14.1 through 8.14.5 of the *American Canyon General Plan* would minimize much of the potential impact by requiring erosion control plans and erosion control measures for proposed developments.

3. *Would the project be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?*

- ☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

As noted in F.1.c and F.1.d most of the soil within the SOI expansion areas are not soils that have a high potential for liquefaction or landsliding. Areas prone to collapse have not been identified in the region. Land subsidence in the American Canyon vicinity is likely to be restricted to instant compaction of sands (as described in the liquefaction discussion), or the long-term compaction and plastic flow of thick, water saturated mud in the marshlands. Portions of SOI Areas 3 and 4 include historic marshlands and may be subject to this form of subsidence. The change in the SOI would not directly lead to impacts associated with subsidence but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in SOI Areas 3 and 4 are similar whether under county or city jurisdiction and thus the potential for impact is the same in both jurisdictions. Potential subsidence impacts associated with new development will be addressed by the appropriate land use authority at the time it is proposed

in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

4. *Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Expansive soil potential within the SOI areas is unknown at this time. A subsurface soils exploration would identify an individual site's soil profile and expansive soil potential. The change in the SOI would not directly lead to impacts associated with expansive soils but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus the potential for impact is the same in both jurisdictions. Development in conformance with current UBC standards and incorporation of standard techniques to mitigate potentially adverse expansive soil impacts would reduce impacts. Potential expansive soils impacts associated with new development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage. *American Canyon General Plan* Policy 9.4.5 requires development in areas susceptible to expansive soils to include adequate mitigation of this hazard.

5. *Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Development within the city would require connection to its sewer system (General Plan Policies 5.14.4 and 8.9.1). As discussed under checklist item **P. Utilities and Service System**, adequate wastewater treatment capacity is available at the American Canyon Wastewater Treatment Plant for buildout projections, including development of the four SOI areas. For this reason, alternative wastewater disposal systems are not expected to be proposed within the SOI areas, resulting in no impact.

Geology and Soils' Conclusion Geologic, soils, and seismic conditions would result in no impacts.

- G. Hazards and Hazardous Materials** Hazardous materials are substances which can harm people or the environment. These materials can impair human health if contacted, ingested, or inhaled. Contacts which expose people and wildlife to harm occur when such substances are encountered in soil, groundwater, surface water, or air or when operations associated with specific land uses are deemed hazardous processes.

Within the California EPA, the Department of Toxic Substances Control (DTSC) has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the state agency, for the generation, transport and disposal of hazardous substances under the authority of the Hazardous Waste Control Law (HWCL). Regulations implementing the HWCL list approximately 791 hazardous chemicals and 20 to 30 more common

substances that may be hazardous; establish criteria for identifying, packaging and labeling hazardous substances; prescribe management of hazardous substances; establish permit requirements for hazardous substances treatment, storage, disposal and transportation; and identify hazardous substances that cannot be deposited in landfills.

Under the HWCL, the generator of a hazardous substance must complete a manifest that accompanies the waste from the point of generation to the ultimate treatment, storage or disposal location. The manifest describes the waste, its intended destination, and other regulatory information about the waste. Copies must be filed with the DTSC. Generators must also match copies of waste manifests with receipts from the treatment, storage or disposal facility to which it sends waste.

California law requires that Hazardous Waste (as defined in California Health and Safety Code Division 20, Chapter 6.5) be transported by a California registered hazardous waste transporter that meets specific registration requirements. The requirements include possession of a valid Hazardous Waste Transporter Registration, proof of public liability insurance which includes coverage for environmental restoration, and compliance with California Vehicle Code registration regulations required for vehicle and driver licensing. A complete list of requirements can be found in Title 22 CCR, Chapter 13.

State agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roads.

Electromagnetic Fields Wherever there is electric current there are also electric and magnetic fields (EMFs). Electric fields are created by voltage or appliance usage, while magnetic fields are produced by electric current (i.e. when charges are in motion). The magnetic field depends on the motion of the charges, and its strength is proportional to the current in the circuit. The AC fields to which we are all exposed come from high voltage, long-distance transmission lines, as well as other distribution lines and electric appliances. The strength of electric and magnetic fields are reduced dramatically as one moves away from the source. Electric fields may be blocked by objects such as earth, trees, or buildings, while magnetic fields are generally not blocked by such objects. A set of PG&E electrical power transmission lines carrying 115 kV and 230 kV electrical currents bisects the southern portion of the city and the planning area. The lines are located a distance of approximately 1,500 feet from SOI Area 1. The General Plan restricts the development of residences and schools nearby the PG&E ROW to minimize exposure of the public to electric and magnetic field impacts.

Airport Background The Napa County Airport is located northwest of the City of American Canyon. The 1991 (revised 1999) *Airport Land Use Compatibility Plan* (ALUCP) addresses airport compatibility land use issues for development located within the vicinity of the airport, including noise impacts, flight hazards, safety, and overflight impacts. The Napa County Airport Land Use Commission (ALUC) reviews project referrals for consistency with the ALUCP. The Commission also reviews local general and specific plans of the affected jurisdictions to determine consistency with the ALUC's policies. The *American Canyon General Plan* has not been approved by the ALUC. All discretionary actions within the airport planning area within the city limits must be submitted to the ALUC for a consistency determination, including annexation.

1. *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Future development within the SOI areas potentially could involve the transport, use or disposal of hazardous materials depending on the eventual land use proposed for the areas. Commonly used household cleaners, pesticides, solvents, and petrochemicals would likely be used, however, use of these types of substances would not occur in significant (that is, regulatory) amounts or frequencies to constitute a potential hazard to the public or the environment. Some industrial development is anticipated in Area 3. The potential for hazardous materials to be routinely involved in operating and maintaining the future development is unknown at this time. Any such use would be subject to State and federal regulations governing the handling and transport of hazardous materials, as discussed above.

Adherence to State and federal regulations related to the handling and transport of hazardous materials would assure no significant impact would result from the transport, use or disposal of hazardous materials associated with future industrial development. Further, the change in the SOI would not directly lead to industrial development and associated hazardous materials impacts but would indirectly lead to such impacts should the area be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in SOI Area 3 are similar whether under county or city jurisdiction and thus the potential for hazardous materials impacts would be similar. Thus the project (changes to the American Canyon SOI) would not lead to significant hazardous materials impacts.

2. *Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

As discussed in Checklist Item G.1 (above), the potential use of hazardous materials which could represent a hazard to the public or the environment in future industrial development is unknown at this time, however, implementation of State and federal regulations would assure the proper handling, transport, use and disposal of hazardous materials associated with future development.

There are no known hazardous materials located within the SOI areas which could be accidentally released. However, it is possible unknown hazardous substances may be discovered during the construction process which would pose a hazard to site workers and nearby residents if not properly handled and disposed of. SOI Area 1 may have had past agricultural uses which are associated with petrochemicals and pesticides. Vacant land within SOI Area 2 also may have had past agricultural uses. Additionally, there are industrial uses in the area which may have resulted in the release or disposal of hazardous materials. SOI Area 3 may also be associated with hazardous substances resulting from industrial or agricultural activities. SOI Area 4 may have hazardous substances or debris resulting from past unauthorized disposal of unwanted materials. Completion of a Phase I, and if necessary Phase II, Environmental Site Assessment on the subject property prior to development would address these potential hazardous materials impacts.

The change in the SOI would not directly lead to hazardous materials impacts but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus the same potential for impact would be expected. Thus the project (changes to the American Canyon SOI) would not lead to significant hazardous materials impacts. Potential hazardous materials impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

3. *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

There are no existing schools within one-quarter mile of any of the four SOI areas. Existing schools located nearest to the four SOI areas are operated by the Napa Valley Unified School District (NVUSD). They are Donaldson Way School at 430 Donaldson Way and Napa Junction School at 300 Napa Junction Road. The nearest SOI area to the Donaldson Way School is SOI Area 4, which is approximately 0.7 mile away (3,750 feet fig 17-3). SOI Area 2 is nearest to Napa Junction School at approximately 0.5 mile away. Any materials routinely involved in operating and maintaining future SOI area development would be used more than one-quarter mile from any existing school, therefore, no impact to existing schools would be expected to result from future development in the SOI areas.

The NVUSD has plans to construct new schools within the vicinity of or on SOI Area 1. As discussed in Checklist Items G.1 and G.2 (above), implementation of State and federal regulations and a Phase I/II Environmental Site Assessment would assure the proper handling of known and unknown hazardous materials, substances, or wastes. Completion of an Environmental Site Assessment on SOI Area 1 and any necessary toxic substances abatement, would reduce the potential hazardous materials impacts. The change in the SOI would not directly lead to hazardous materials impacts but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, development of a school on SOI Area 1 is anticipated by both the county and city and thus the same potential for impact would be expected. Potential hazardous materials impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

Additionally, PG&E electrical power transmission lines are located approximately 1,500 feet from SOI Area 1. *American Canyon General Plan* Policy 1.30.1 would require setbacks of 100 feet from the edge of the ROW for 100-110 kV lines and 150 from 220-230 kV lines or establishment of a setback to the 1 mG magnetic fields level, whichever is greater. Due to the distance of SOI Area 1 from the ROW, development on the parcel would not be adversely affected by electric and magnetic fields.

4. *Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The four SOI sites are not included on the “Hazardous Waste and Substances Site List” (known as the Cortese list) compiled by the State Department Toxic Substances Control (DTSC) under Government Code Section 65962.5.⁶ The nearest hazardous materials sites on the Cortese list are located in the City of Napa and southern Vallejo.

5. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The *Airport Land Use Compatibility Plan* restricts certain types of development within particular zones near the Napa County Airport. Sphere of influence Areas 2 through 4 are located within airport compatibility zones. Area 2 is in Zone D, Area 3 includes portions in Zones A, B and D, and Area 4 includes portions within Zones C and D. The Airport Vicinity Land Use Compatibility Criteria table is provided in Appendix 2. The SOI development assumptions do not include any prohibited uses within the SOI areas, however proposed future development is unknown at this time. State law requires development within local jurisdiction affected by airport activities be consistent with the ALUCP. Therefore, future development would be required to adhere to the land use, height and other development restrictions of the plan. The project (changes to the American Canyon SOI) would not lead to significant airport compatibility impacts.

6. *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

There are no known private aviation facilities within the American Canyon vicinity.⁷ Therefore, project implementation would not be expected to expose future residents or people visiting the site to safety hazards from aircraft. Thus, the project would have no impact.

7. *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Development on the four SOI areas is not expected to interfere physically with emergency response or evacuation. Such development would not modify or eliminate evacuation routes.

⁶ “Hazardous Waste and Substances Site List”, State Department Toxic Substances Control (DTSC).

⁷ Nichols Berman email communication with Wanda Kennedy, Director, Airport Industrial Park of Napa County, October 3, 2003.

The four SOI areas currently fall under the *Napa County Emergency Operations Plan*, and upon annexation would fall under the City of American Canyon *Emergency Operations Plan*. In addition, the Fire Protection District recently completed a service plan for the Green Island Road area (*Fire Services for North Green Island Road*, American Canyon Fire Protection District). Proposed future development plans would be reviewed by the American Canyon Fire Protection District to assure no interference with emergency evacuation procedures. Project implementation (approval of the SOI changes) would not affect the implementation of county or city Emergency Operation Plans. For these reasons, the project would result in no impact.

8. *Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☒ Less-Than-Significant Impact ☐ No Impact

The type of surrounding vegetation, proximity to slope, and amount of sun exposure all contribute to a development's potential wildland fire risk. Generally, the greatest risk is associated with south-facing development located upslope of pyrophytic vegetation. With the exception of Area 4, the proposed SOI areas are generally flat lying with little vegetation. Such areas are not associated with a significant wildland fire risk. Incorporation of the minimum fire safety standards required by the state building code and the American Canyon Fire Protection District would reduce potential wildland fire hazards to a less-than-significant level in SOI Areas 1 through 3.

Eucalyptus trees are considered pyrophytic and provide a heavy fuel load due to the abundance of debris (dried leaves and branches) and the flammability of eucalyptus oil. Future development within the eucalyptus grove area would be subject to an elevated wildland fire risk. The proposed SOI changes would not lead to increased wildland fire risk but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. Development within the County would be subject to the Uniform Fire Code and any County regulations. Under the jurisdiction of the American Canyon Fire Protection District, development on the Eucalyptus Groves properties would be required to conform with the *Uniform Fire Code Appendix 2*, which contains the codes and requirements for development at the wildland-urban interface, as well as with the American Canyon Weed and Rubbish Abatement Ordinance (95-2), which would require developers to clean up both organic detritus and the accumulated debris on the site (which also represents a significant fire hazard). This would reduce the potential wildland fire impact to a less-than-significant level.

Hazardous and Hazardous Materials Conclusions The proposed changes to the American Canyon SOI would result in less-than-significant impacts.

H. Hydrology and Water Quality.

1. *Would the project violate any water quality standards or waste discharge requirements?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The City of American Canyon currently provides wastewater collection, treatment, and disposal services for all residential, commercial, and industrial developments within the four

SOI expansion areas. Current flow is approximately 1.1 to 1.3 million gallons per day (mgd). Any further development in the SOI expansion areas would increase the demand for wastewater treatment. In 2002, the city brought a new wastewater treatment facility online capable of treating an average dry-weather flow of 2.57 mgd and a peak wet-weather flow of 5.0 mgd. This capacity was designed to accommodate the projected demand at buildout throughout the service area, which is expected to be 2.47 mgd (average dry-weather flow) and 5.0 mgd (peak wet-weather flow), and included development in the four SOI expansion areas.⁸ Therefore, development in the SOI expansion areas would not lead to a violation of water quality standards resulting from inability to meet waste discharge requirements.

Surface waters in all four SOI expansion areas drain via smaller creeks into the Napa River, which flows into the San Francisco Bay. New development in the SOI expansion areas could increase runoff, erosion, and accumulation of debris in the existing drainage channels. The increases in erosion and sedimentation are greatest during periods of new construction, and would affect the quality of the streams as well as the Napa River. Additionally, development within the SOI expansion areas would result in an increase in automotive trips, which would increase the level of automotive-related petrochemical residues and heavy metals in stormwater runoff.

Because there are no current development proposals for the SOI expansion areas, and therefore no detailed drainage plans, the potential impact of development in these areas is unknown at this time. Construction activities could result in increased erosion and sedimentation or accidental release of construction-related chemicals which may impact downstream waterways and the Napa River. Construction-related runoff as well as post-construction runoff could contribute to the water quality degradation.

The change in the SOI would not directly lead to water quality impacts but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus a similar level of water quality impacts would be expected. Proper implementation of erosion and chemical control plans during construction would reduce this potential contribution to water quality degradation. Depending upon the area of disturbance, future development will be required to obtain a National Pollutant Discharge Elimination System (NPDES) stormwater permit or a Storm Water Pollution Prevention Plan which complies with a State General Storm Water Permit for Construction Activities. Water quality impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage. Implementation of General Plan Policies 5.10.16 through 5.10.18, 5.12.1 through 5.12.3, 5.13.1, 5.13.2, 8.7.1, 8.7.2, 8.8.1, 8.9.1 through 8.9.3, and 8.14.1 through 8.14.5 would reduce the impact on water resources through the improvement of runoff water quality, protection of creeks, minimization of erosion, and prevention of ground and surface water pollution from development activities.

⁸ City of American Canyon Wastewater Treatment and Reclamation Project, Redesign Report, Dames & Moore, November 1997 and LAFCO of Napa County conversation with Tom Foley, Wastewater Treatment Plant Supervisor, City of American Canyon, October 21, 2003.

2. *Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

SOI expansion Areas 1, 2, and 3 and part of Area 4 are currently within the City of American Canyon water service area.⁹ The city obtains water through contractual agreements with the City of Vallejo and the Napa County Flood Control and Water Conservation District (NCFCWCD), and not from groundwater sources. There are currently a few wells supplying existing residents and agricultural uses within the SOI areas and city vicinity.

After annexation to the city, development in the SOI expansion areas would connect with the city water services. Because the city does not obtain water from an underground water source, there is no potential for development in these areas to deplete groundwater supplies through domestic use. Further, the SOI areas are not located within one of the four the major groundwater basins of Napa County.¹⁰

Development in these areas would increase impervious surfaces, which could minimally reduce groundwater recharge. Area 4 is expected to have the greatest level of development and thus would have the greatest effect on groundwater recharge. However, due to the fact that the majority of the soils deposits in SOI Area 4 are clayey, groundwater recharge in this area is already minimal.¹¹ Consequently, the impervious surfaces resulting from development would not be expected to result in a substantial change in groundwater recharge rates. For the other three SOI areas, the nominal increase in impervious surface area anticipated in this study would not be expected to significantly effect groundwater recharge.

3. *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

According to Figure 14-1 of the *American Canyon Technical Background Report*, all four SOI areas are traversed by either a creek or stream. Development in the SOI expansion areas could potentially alter the existing drainage patterns. The significance of such alterations is unknown at this time, as drainage and erosion potential depend on project design. The change in the SOI would not directly lead to drainage-related impacts but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development

⁹ *City of American Canyon Water System Master Plan*, HydroScience Engineers, Inc, February 2003.

¹⁰ Napa County Ordinance NO. 1162

¹¹ Technical Background Report page 15-3.

occur. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus a similar level of drainage-related impacts would be expected. Impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage. The *American Canyon General Plan* identifies loss of soil from erosion as an issue area, and outlines policies to minimize much of the potential impact by requiring erosion control plans and erosion control measures for proposed developments.

4. *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

According to Figure 14-1 of the *American Canyon Technical Background Report*, all four SOI areas are traversed by either a creek or stream. Development in the SOI expansion areas could potentially alter the existing drainage. The significance of such alterations is unknown at this time, as drainage and flooding potential depend on project design. The change in the SOI would not directly lead to drainage-related flooding impacts but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus a similar level of flooding impacts would be expected. Impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage. Implementation of *American Canyon General Plan* Policies 5.10.1 through 5.10.5, 5.10.8 through 5.10.15, 5.11.1 through 5.11.3, 8.7.1, 8.7.2, and 10.1.1 through 10.1.4 would reduce potential runoff and flooding impacts.

5. *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Runoff from the SOI expansion areas goes directly or indirectly into local creeks and then into the Napa River. New development would cause increased runoff which potentially could result in localized flooding if the existing storm drainage facilities are inadequate. A higher peak flow resulting from increased impervious surfaces potentially could impact not only the conveyance facilities within the City of American Canyon but also the downstream creeks and rivers. The change in the SOI would not directly lead to additional runoff and related stormwater drainage system impacts but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus a similar level of runoff and related stormwater drainage system impacts would be expected. Impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage. As discussed above, *American Canyon General Plan* Policies 5.10.1 through

5.10.5, 5.10.8 through 5.10.15, and 5.11.1 through 5.11.3 should ensure improvements the city's storm drainage system to accommodate future growth, while policies 5.12.1 through 5.12.3, 5.13.1, and 5.13.2 address storm runoff water quality. Additionally, the American Canyon Public Works Department reviews all development proposals to determine what effect, if any, they would have on storm drainage facilities and to design mitigations as needed.

6. *Would the project otherwise substantially degrade water quality?*

- ☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Same as Checklist Item H.1 (above).

7. *Would the project place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*

- ☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The western portions of SOI Areas 3 and 4 are within the 100-year flood area, as shown in Figure 10-1 of the *American Canyon General Plan*. SOI Area 3 is currently designated for industrial development and SOI Area 4 is currently designated for commercial recreation in the General Plan. No housing is proposed in either of these areas, therefore no impact would result and no mitigation measures would be required.

8. *Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?*

- ☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The western portions of SOI Areas 3 and 4 are within the 100-year flood area, as shown in Figure 10-1 of the *American Canyon General Plan*. Area 3 is currently designated for industrial development and the parcels in Area 4 are currently designated for commercial recreation in the General Plan. The change in the SOI would not directly lead to flood-related impacts but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in SOI Areas 3 and 4 are similar whether under county or city jurisdiction and thus a similar level of flood related impacts would be expected. Impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage. Implementation of *American Canyon General Plan* Policies 5.10.1 through 5.10.5, 5.10.8 through 5.10.15, 5.11.1 through 5.11.3, 8.7.1, 8.7.2, and 10.1.1 through 10.1.14 would minimize the potential impacts from placement of structures in flood zones by requiring review of developments in these areas, updating and improving plans and studies, and encouraging design of developments to minimize flood hazards.

9. *Would the project expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee, streambank or dam?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

A small western portion of SOI Area 3 could be inundated in the event of a failure of Conn Dam, Milken Dam, or Rector Reservoir, as shown in figure 9-3 of the *American Canyon General Plan*. The change in the SOI would not directly lead to flood-related impacts but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in SOI Area 3 are similar whether under county or city jurisdiction and thus a similar level of flood related impacts would be expected. Impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage. *American Canyon General Plan* Policies 9.7.1 through 9.7.3 restrict development of sensitive and high-occupancy uses within the potential inundation areas.

10. *Would the project result in inundation by seiche, tsunami, or mudflow?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

A seiche is a rise or fall of the surface of a water body which typically is induced by strong winds blowing across a long axis in a lake or embayment. Large bodies of water such as Lake Berryessa, Lake Hennessey and other reservoirs would be subject to seiche. Because none of the SOI expansion areas are located near such bodies of water there is no risk of inundation by seiche.

A tsunami is a high large seawave generated by earthquakes. Since the SOI expansion areas have no direct ocean frontage the possibility of inundation by tsunami is low. A tsunami run-up at the Golden Gate could potentially reach the vicinity of the SOI expansion areas, however, it is estimated that a run-up of twenty feet at the Golden Gate would be negligible by the time it reached Napa County.¹²

Mudflows are viscous slurries composed of floodwaters and entrained sediments and debris. Mudflows develop within active drainageways, therefore associated hazards normally apply to structures within the 100-year floodplain. Portions of SOI Areas 3 and 4 are within the 100-year floodplain, therefore there is a potential for inundation by mudflow. As discussed above under checklist item H.8, anticipated land uses in SOI Areas 3 and 4 are similar whether under county or city jurisdiction and thus a similar level of flood related impacts would be expected. Flooding impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

Hydrology and Water Quality Conclusions The proposed changes to the American Canyon SOI would not result in significant hydrology impacts.

¹² *Napa County General Plan*, 1983, amended through 1992.

I. Land Use and Planning As shown on Figure 1-1 of the *American Canyon General Plan*, the four SOI areas are within the *American Canyon General Plan* land use planning area.

1. *Would the project physically divide an established community?*

- ☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The proposed project would result in the expansion of the City of American Canyon sphere of influence in four areas located along the city's perimeter. As such, the project would not result in development or other changes which could physically divide an established community.

2. *Would the project conflict with any applicable land use plan, policy, or regulation or an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?*

- ☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The proposed SOI expansion would not conflict with any adopted plans. The four areas are included in the city's planning area. Development proposed in any of the four SOI areas would be subject to the city's General Plan subsequent to annexation.

3. *Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?)*

- ☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

As noted in Checklist Item D.6 (above), the project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

Land Use and Planning Conclusion The proposed changes to the American Canyon SOI would not result in significant land use and planning impacts.

J. Mineral Resources According to Figure 8-3 of the *American Canyon General Plan*, five areas with known significant mineral resources have been identified in the American Canyon planning area. Sand, Gravel, and rock production areas have been identified nearby Areas 1 and 4, but none are within the SOI areas. The mineral resources within the planning area are not known to exist in economically sustainable quantities.

1. *Would the project result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state?*

- ☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

There are no known mineral resource areas within the boundaries of the four SOI sites. Thus, development of the sites would not result in the loss of availability of a known mineral resource and would represent no impact.

2. *Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Same as J.1, above.

Mineral Resources Conclusions The proposed changes to the American Canyon SOI would result in no impacts on mineral resources.

- K. Noise** The City of American Canyon addresses noise in Chapter 11 of its 1994 General Plan. The *American Canyon General Plan* establishes land use compatibility noise guidelines in Figure 11-2 and provides policies to minimize the impact of community noise. The General Plan EIR generally describes the intent of the policies. Policies 11.1.1 through 11.1.3 deal with the control of ambient and stationary noise impacts throughout the city. Policies 11.2.1 through 11.2.10 encourage the protection of existing and future residents, employees, and visitors from excessive noise. Policies 11.3.1 through 11.3.7 deal with minimizing the adverse effects of traffic-generated noise on residential and other noise sensitive land uses. Policies 11.4.1 through 11.4.3 and Policies 11.10.1 through 11.10.2 deal with noise and land use planning around Napa County Airport and along the Southern Pacific Railroad. Additionally, Policies 11.11.1 through 11.11.3 deal with the effects of stationary noise sources. Studies are required for a new or renovated land use which could potentially cause stationary noise which would affect another land use.

The City of American Canyon has adopted Napa County Noise Ordinance.¹³ The County ordinance regulates a stationary noise source located on one property as it would affect noise levels on another property. The allowable amount of noise is based on the sensitivity of the land use receiving the noise. For example, in rural residential areas, the allowable median hourly sound level (L50) is 50 dBA during the daytime and 45 dBA at night. Higher noise levels are allowed for shorter time periods within an hour. Corrections are applied for the character of the noise.

¹³ Nichols Berman communication with Lynn Goldberg, American Canyon Planning Department, November 21, 2003.

EXHIBIT 7

DEFINITIONS OF ACOUSTICAL TERMS USED IN THIS REPORT

Term	Definition
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, Leq	The average A-weighted noise level during the measurement period. The hourly Leq used for this report is denoted as dBA $L_{eq[h]}$.
Day / Night Noise Level, Ldn	The average A-weighted noise level during a 24-hour day, obtained after addition of ten decibels (10 dB) to level measured in the night between 10:00 PM and 7:00 AM.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of five decibels (5 dB) in the evening from 7:00 PM to 10:00 PM and after addition of ten decibels (10 dB) to sound levels in the night between 10:00 PM and 7:00 AM.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: Illingworth & Rodkin, Inc., Acoustical Engineers

EXHIBIT 8
TYPICAL NOISE LEVELS IN THE ENVIRONMENT

<i>Common Outdoor Noise Source</i>	<i>Noise Level (dBA)</i>	<i>Common Indoor Noise Source</i>
120 dBA		
Jet fly-over at 300 meters		Rock concert
110 dBA		
Pile driver at 20 meters		
100 dBA		
		Night club with live music
90 dBA		
Large truck pass by at 15 meters		
80 dBA		
		Noisy restaurant
		Garbage disposal at 1 meter
70 dBA		
Gas lawn mower at 30 meters		Vacuum cleaner at 3 meters
Commercial/Urban area daytime		Normal speech at 1 meter
60 dBA		
Suburban expressway at 90		
Suburban daytime		Active office environment
50 dBA		
Urban area nighttime		Quiet office environment
40 dBA		
Suburban nighttime		
Quiet rural areas		Library
30 dBA		
Wilderness area		Quiet bedroom at night
20 dBA		
Most quiet remote areas		Quiet recording studio
10 dBA		
Threshold of human hearing		Threshold of human hearing
0 dBA		

Source: Illingworth & Rodkin, Inc., Acoustical Engineers

Existing Noise Environment The noise environment throughout the area results from vehicular traffic on the local street network and Highway 29. Aircraft operations from Napa County Airport and railroad trains affect their environs. The City of *American Canyon General Plan EIR* contain measured noise level data at three of the SOI areas and projected future noise level data for the four SOI areas (Tables N-3 and N-4, respectively).

Sphere of Influence (SOI) Area 1 is located adjacent to American Canyon Road and Flosden Road. The City of American Canyon *General Plan EIR* contains measured noise level data at this intersection. The day/night average noise level is estimated to be approximately 68 L_{dn}. Using traffic data developed for this Initial Study, the noise level along the Flosden Road frontage is estimated to be an L_{dn} of 69 dBA at 50 feet from the near lane centerline, and the noise level along American Canyon Road frontage is estimated to be 70 L_{dn} at 50 feet from the near lane centerline.

SOI Area 2 is located along Watson Lane east of Highway 29. Generalized noise exposure contours set forth in the City of American Canyon *General Plan EIR* indicate noise exposure in the Watson Lane area to be less than 60 L_{dn}. Railroad train noise is estimated from the General Plan to be 65 L_{dn} adjacent to the railroad tracks and 60 L_{dn} at a distance of approximately 250 feet from the railroad tracks. Distant traffic on Highway 29 is the most significant source of transportation noise in this area.

SOI Area 3 is located along Green Island Road west of Highway 29. A railroad line cuts diagonally through these areas. The General Plan EIR identifies noise levels of up to 70 dBA L_{dn} along the railroad line. The area is also affected by aircraft operations at Napa County Airport. The Napa County Airport noise contours indicate noise exposure ranging from 55 CNEL to as high as about 65 CNEL in the western portion of this area. Using traffic data prepared for this Initial Study, vehicular traffic noise along Green Island Road is estimated to be approximately 61 L_{dn} at 50 feet from the center of the near lane.

SOI Area 4 is known as the Eucalyptus Groves. The General Plan EIR did not provide existing ambient noise data for this area. The airport noise exposure map shows that this area is exposed to below 55 CNEL from aircraft noise and below 55 CNEL for noise from railroad trains. The “future” noise contour map contained in the General Plan EIR indicates that the future baseline noise exposure along the extended Wetlands Edge Road would be expected to be about 60 to 65 dB L_{dn}.

1. *Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

American Canyon standards for noise level compatibility with various land use categories are established in Figure 11-2 of the General Plan. Within all four sphere of influence areas, existing noise levels are compatible with the proposed land uses and thus development would not be expected result in exposure of persons to noise levels in excess of the *American Canyon General Plan* noise standards.

With regard to the generation of noise, the City of American Canyon has adopted the Napa County Noise Ordinance to regulate how a stationary noise source located on one property

would affect noise levels on another property. The proposed land uses on SOI Areas 1, 2 and 4 are not expected to generate noise levels in excess of the County Noise Ordinance limits. Proposed industrial development in SOI Area 3 could result in exposure of several rural residences located along Green Island Road to noise levels in excess of the allowable limits set forth in the County Noise Ordinance: a median hourly sound level (L_{50}) of 50 dBA during the daytime and 45 dBA at night in rural residential areas. The actual noise exposure would depend on the noise generation from a particular land use development and its proximity to any residences that would remain in the area once the development occurs. The change in the SOI would not directly lead to noise impacts but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, the anticipated land use in SOI Area 3 is similar whether under county or city jurisdiction and thus a similar level of noise impact would be expected. A noise impact assessment and incorporation of noise control measures to limit noise exposure to existing residences resulting from future industrial development would assure compliance with the County's allowable noise limits. Noise impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

2. *Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Groundborne noise is associated with underground transit. Groundborne vibration can result from pile driving and railroad use in close proximity. Railroad use in Area 3 is limited, and is not expected to substantially increase in the future to the point where vibrations at track level would require mitigation. The change in the SOI would not directly lead to vibration impacts but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, the anticipated land use in SOI Area 3 is similar whether under county or city jurisdiction and thus a similar level of potential vibration exposure impact would be expected. It shall be the responsibility of future project developers to determine the vibration exposure levels on their properties and incorporate adequate vibration controls to minimize the adverse effect of groundborne vibration.

3. *Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above existing levels without the project?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Increases in vehicular traffic noise were analyzed for the street network in the vicinity of the SOI study areas. The only roadway segment that would be affected by traffic noise resulting from the project would be Green Island Road in SOI Area 3. Vehicular traffic L_{dn} noise levels from SOI Area 3 and cumulative development are projected to increase about 6 dBA above existing in this area along Green Island Road. Several rural residences are located on the north side of Green Island Road in this segment. The change in the SOI would not directly lead to noise impacts but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, the anticipated land use in SOI Area 3 is similar whether under county or city jurisdiction and thus a similar level

of noise impact would be expected. Noise impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

4. *Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above existing levels without the project?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Construction in the SOI areas would temporarily elevate noise levels at existing residences in the area. The magnitude of noise levels during construction periods depend on construction schedules, the type and amount of construction equipment/machinery operating, the duration of use, and the location and distance of sensitive noise receptors. It is anticipated that the exposure of persons to a particular construction project would be limited in duration to a period of one year or less. Standard measures to control construction noise levels, such as those listed below, can be employed to reduce the level of impact to existing residences and other sensitive areas to a less-than-significant level.

- Limit construction to the hours of 7:00 AM to 7:00 PM on weekdays, and 9:00 AM to 5:00 PM on Saturdays, with no noise-generating construction on Sundays or holidays.
- Equip all internal combustion engine-driven equipment with mufflers which are in good condition and appropriate for the equipment.
- Utilize “quiet” models of air compressors and other stationary noise sources where technology exists.
- Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.
- Prohibit unnecessary idling of internal combustion engines.

If implementation of such measures as listed above does not occur, impacts from construction on noise levels could be significant. However, the proposed SOI changes would not directly lead to construction noise impacts but may indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus would result in similar construction noise impacts. Thus the project (changes to the American Canyon SOI) would not result in a significant impact. Construction noise impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

5. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Significant Impact Incorporation of Mitigation Significant Impact Impact

Napa County Airport, a general aviation airport and occasional pilot training center, is the only air facility in the American Canyon vicinity. No noise sensitive land uses are proposed within the airport environs, so there would be no noise impact. See Checklist Item G.5 for a further discussion.

6. *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

There are no private airstrips in the project vicinity, resulting in no impact.

Noise Conclusions The proposed changes to the American Canyon SOI would not result in significant noise impacts.

- L. Population and Housing** The Association of Bay Area Governments (ABAG) publishes population and other demographic projections based on census data. ABAG's *Projections 2002* for American Canyon's and its existing sphere of influence indicate a population of 12,900 in 2010. According to the Comprehensive Study of American Canyon: Service Review, the ABAG projections "are satisfactory estimates of future population of American Canyon" (Determination 1.1). These population projections reflect additional housing development expected in the city, including in response to jobs created by new commercial or industrial development.

1. *Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

None of the assumed development within the SOI areas is residential, however, the additional industrial and warehousing development along Green Island Road as well as the new high school would be expected to result in job creation, fulfillment of which could result in population growth. However, the change in the SOI would not directly lead to population growth but would indirectly lead to growth should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in SOI Areas 1 and 3 are similar whether under county or city jurisdiction and thus a similar level of population growth would be expected. Essential infrastructure, such as roadways, sewer and water mains, already serve the four SOI areas or their immediate vicinity. For these reasons, the project would not directly or indirectly induce substantial population growth and would not result in a significant population increase.

2. *Would the project displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Most of the proposed sphere of influence expansion areas are currently vacant. No existing housing units or any other uses would be removed or relocated with project implementation. Because the project would not require construction of replacement housing, it would result in no impact.

3. *Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Same as Checklist item L.2 (immediately above). No people would be displaced, none would be relocated, and no new replacement housing would be required. Thus, there would be no impact.

Population and Housing The proposed changes to the American Canyon SOI would not have significant population and housing impacts.

M. Public Services

Fire Protection Fire protection responsibilities in the City of American Canyon belong to the American Canyon Fire Protection District (ACFPD), a subsidiary district of the City of American Canyon. The ACFPD operates one fire station located at 225 James Road. The district has two Type-1 engines, one Type-2 engine, and one Type-3 engine. It also has one Type-1 water tender, one Type-2 service unit, one utility vehicle, two command vehicles, and three support units. Current ACFPD personnel includes one Fire Chief, three Fire Captains, three Fire Engineers, six paid firefighters, and twenty reserve firefighters. The ACFPD responded to 1,259 calls in 2002. The Board of Directors has recently approved one new Type-1 engine and a new 75 foot aerial ladder. In addition, the ACFPD is in the initial stages of building a new fire station. The station will also house the American Canyon Police Department, and will be funded in part by the city and in part from a fund containing money from a voter-approved one-time tax on new development.¹⁴ The ACFPD service area includes all of American Canyon and SOI Area 2 and part of Area 3. SOI Areas 1, 4, and part of Area 3 are outside the current service area. LAFCO has a Joint Annexation Policy that requires property annexed into the city to also annex into the Fire Protection District.

Police Protection American Canyon offers police protection to residents through a contract with the Napa County Sheriff's Department. Recent contracts have increased the level of protection offered to residents. The contract for Fiscal Year 2001-02 added new terms to designate a Lieutenant in the Sheriff's Department as the American Canyon Chief of Police. There are currently nine Deputies, one Sergeant, and one Lieutenant who acts as Chief of Police assigned to American Canyon. The American Canyon Police currently serve only the properties within the corporate limits of the city. Police service in the SOI expansion areas is currently provided by the Napa County Sheriff's Department directly.¹⁵

¹⁴ Nichols Berman conversation with Kieth Caldwell, Fire Chief, American Canyon Fire Protection District, September 25, 2003.

¹⁵ *Comprehensive Study of American Canyon Public Workshop Report*, Appendix A: Contract for Law Enforcement Services, April 2003.

Schools The city is part of the Napa Valley Unified School District (NVUSD). There are two elementary schools serving grade K-5 and one middle school serving grades 6-8 (Donaldson Way School at 430 Donaldson Way, Napa Junction School at 300 Napa Junction Road, and American Canyon Middle School at 300 Benton Way). Bus service is provided to City of Napa high schools. High school students go to Vintage High School in Napa located at 1375 Trower Ave. A third elementary school, Canyon Oaks Elementary School, is under construction and it expected to be open in time for the 2004-2005 school year. This school will be located northwest of the Flosden Road/American Canyon Road intersection. A new high school for 1,000 students is proposed for SOI Area 1. The District recently purchased the property for this purpose. Additionally, the middle school is currently being expanded and should be completed in 12-18 months.

Public Parks The city has 17 parks totaling 48 acres. Additionally, the city owns 519 acres of open space area on its western edge that is now being restored as wetlands with recreational facilities. The 640-acre Newell Open Space Preserve with hiking and horse trails is located to the northeast of the city. The city also owns and operates a Community Center and aquatic facility and a branch of the County Library recently opened in Canyon Plaza.

General Plan Policy 7.1.1 establishes a minimum parkland standard of five acres per 1,000 residents. Policies 7.6.1 through 7.6.9 establish implementation and use of the Quimby Ordinance to provide funding for new park acquisition. Applying the 2000 Census population estimate for American Canyon of 9,774 to a parkland calculation, the existing 48 acres of parks in the city give American Canyon a ratio of 4.91 acres of parkland for every 1,000 residents. Including the outlining 1,159 acres of open space area owned by the city results in a ratio of 123.49 acres of parkland for every 1,000 residents.

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

1. *Fire protection?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Development in the four SOI areas would increase the demand for fire protection services from ACFPD. The ACFPD currently charges a voter-approved one time tax on new development within their service area. Funds generated by this tax may only be used for facilities and equipment. Operational expenses are funded through a separate fire service fee which is charged annually to all parcels in the ACFPD's service area. The facilities and equipment fund currently has approximately 2.2 million dollars in it, and will be used to build the new fire station and purchase new equipment.

Because the new fire station is expected to be in service within the next two years, no new or altered facilities would be needed to accommodate new development in the four SOI expansion areas. Further, the change in the SOI would not directly lead to increased demand for fire protection services but would indirectly lead to such demand should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3,

anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus a similar level of population growth would be expected.

2. *Police protection?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The American Canyon Police currently serve only the properties within the corporate limits of the city. Police service in the SOI expansion areas is currently provided by the Napa County Sheriff's Department directly. Therefore, upon annexation, the American Canyon Police Department would provide services to the proposed SOI expansion areas. The city's service contract with the Napa County Sheriff's Department allows for either the city or the Sheriff's Department to respond to service demand increases by increasing personnel as needed. It is anticipated that additional development in the SOI areas would not affect service standards established by the American Canyon Police Department. Further, at its August 14 meeting, LAFCO of Napa County determined that "The design of police protection as a contract service affords the City of American Canyon a desirable amount of flexibility to address increased need. This contract can be amended to address any pressing needs presented by annexation or any other proposed change of organization." Therefore, this would result in no impact on police services.

3. *Schools?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The NVUSD bases future school needs on a projected buildout population of approximately 18,000 residents.¹⁶ The District applies generation factors to this population to determine the number of students that will need to be served in the future.

The General Plan anticipated development on the four SOI areas as part of a greater expanded SOI. For this reason, student generation resulting from development in the four SOI areas has been included in the district's projections. However, it should be noted, residential development is not anticipated on any of the four SOI areas in this Initial Study. Therefore, development in the SOI areas could only cause an indirect increase in the city's population, and thus students, through the creation of new jobs.

Development on the four SOI areas, and any indirect population growth that may result, has been included in the city build-out projections utilized by the school district. Further, as shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus a similar level of population growth would be expected. Therefore, the proposed SOI changes would not result in the need for new or expanded school facilities and would not result in any impact.

4. *Parks?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

¹⁶ Nichols Berman conversation with Don Evans, Napa Valley Unified School District, November 7, 2003.

Significant Impact	Incorporation of Mitigation	Significant Impact	Impact
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According to ABAG projections 2002, the City of American Canyon is expected to have as many as 12,900 residents in 2010. Based on the General Plan Policy 7.1.1 parkland standard of five acres per 1,000 residents, this population would require 64.5 acres of parkland. The city currently has 48 acres of parkland within the city limits and 1,159 acres of open space along the city perimeter. Therefore, the city would have adequate parkland to serve its 2010 population, including residents that may result from jobs created by SOI area development.

5. *Other public services / facilities?*

<input type="checkbox"/> Potentially Significant Impact	<input type="checkbox"/> Less-Than-Significant With Incorporation of Mitigation	<input type="checkbox"/> Less-Than- Significant Impact	<input checked="" type="checkbox"/> No Impact
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General Plan policies would be sufficient to mitigate potential impacts on other city services and facilities, such as the city's library system and city roadways, through the requirement of development impact fees, the General Fund, and long-term facilities maintenance planning. Storm drains, water and sanitary sewer service are addressed under checklist item **P. Utilities and Service Systems**.

Public Services Conclusion The project would not result in impacts on American Canyon public service providers.

N. Recreation The city has over 50 acres of developed parkland, ranging from tot lots to a 20-acre community park. Additionally, the city owns a large open space area on its western edge that is now being restored as wetlands with recreational facilities. Further, the 640-acre Newell Wilderness Park with hiking and horse trails is located northeastern of the city. The city also owns and operates a Community Center and aquatic facility and a branch of the County Library recently opened in Canyon Plaza. General Plan Policy 7.1.1 establishes a minimum parkland standard of five acres per 1,000 residents.

1. *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

<input type="checkbox"/> Potentially Significant Impact	<input type="checkbox"/> Less-Than-Significant With Incorporation of Mitigation	<input checked="" type="checkbox"/> Less-Than- Significant Impact	<input type="checkbox"/> No Impact
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Same as M.4, above.

2. *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

<input type="checkbox"/> Potentially Significant Impact	<input type="checkbox"/> Less-Than-Significant With Incorporation of Mitigation	<input checked="" type="checkbox"/> Less-Than- Significant Impact	<input type="checkbox"/> No Impact
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SOI Area 4 is assumed to become an 80 acre recreational use in this initial study. The city charges new development impact fees to fund the development and expansion of city parklands. Revenue raised through impact fees would be expected to provide for the development of the new 80 acre park. Therefore, the additional recreation facilities assumed by this project would result in a less-than-significant impact.

Recreation Conclusion The project would have less-than-significant impacts on recreation facilities.

- O. Transportation / Traffic** This section describes the major roadway system serving the City of American Canyon, nearby locations in Napa County and the City of Vallejo, as well as current operating conditions at major intersections.

ROADWAYS

Interstate 80 (I-80) is a major six- to eight-lane freeway located to the east of the City of American Canyon. It links the San Francisco Bay Area with Sacramento and points east. Access to I-80 from American Canyon is provided via American Canyon Road, Jameson Canyon Road (via State Route 29 to the north of American Canyon) and State Route 37 (via State Route 29 or Flosden Road to the south of American Canyon) (see Exhibit 9).

State Route 29 is the major north-south arterial roadway in American Canyon. It extends to the City of Vallejo on the south and to the City of Napa and the Napa Valley on the north. It has four travel lanes through American Canyon and major intersections are signalized, although most intersections are not signalized.

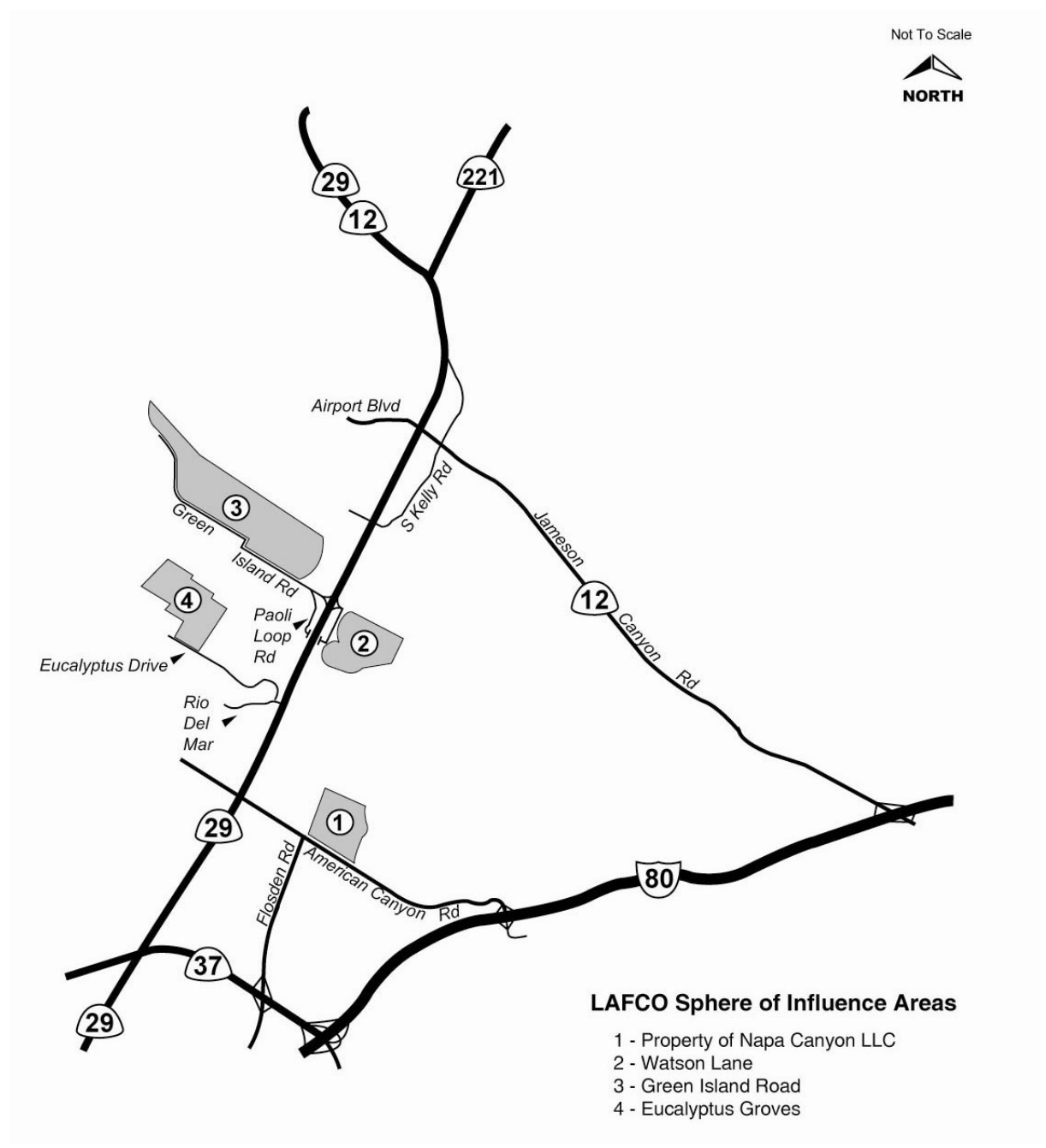
State Route 37 is a major east-west roadway to the south of American Canyon. It extends to Marin and Sonoma counties on the west and to the I-80 freeway on the east. It is a freeway near its connection to I-80, but has a signalized intersection with State Route 29.

State Route 12-Jameson Canyon Road is a two to three lane highway linking I-80 to the east with State Route 29 on the west. It continues west of State Route 29 (several miles north of the Jameson Canyon Road connection to State Route 29) to provide access to Sonoma County. The State Route 12-29 intersection is signalized; the fourth (westerly) leg of this intersection is Airport Boulevard, which provides access to the Napa Airport industrial area.

American Canyon Road is a major east-west arterial roadway serving American Canyon. It extends east of the city to an interchange with the I-80 freeway. American Canyon Road has signalized intersections with both State Route 29 and Flosden Road. In general, it now has two travel lanes east of State Route 29 except near signalized intersections, and four lanes west of State Route 29 (to Elliott Drive).

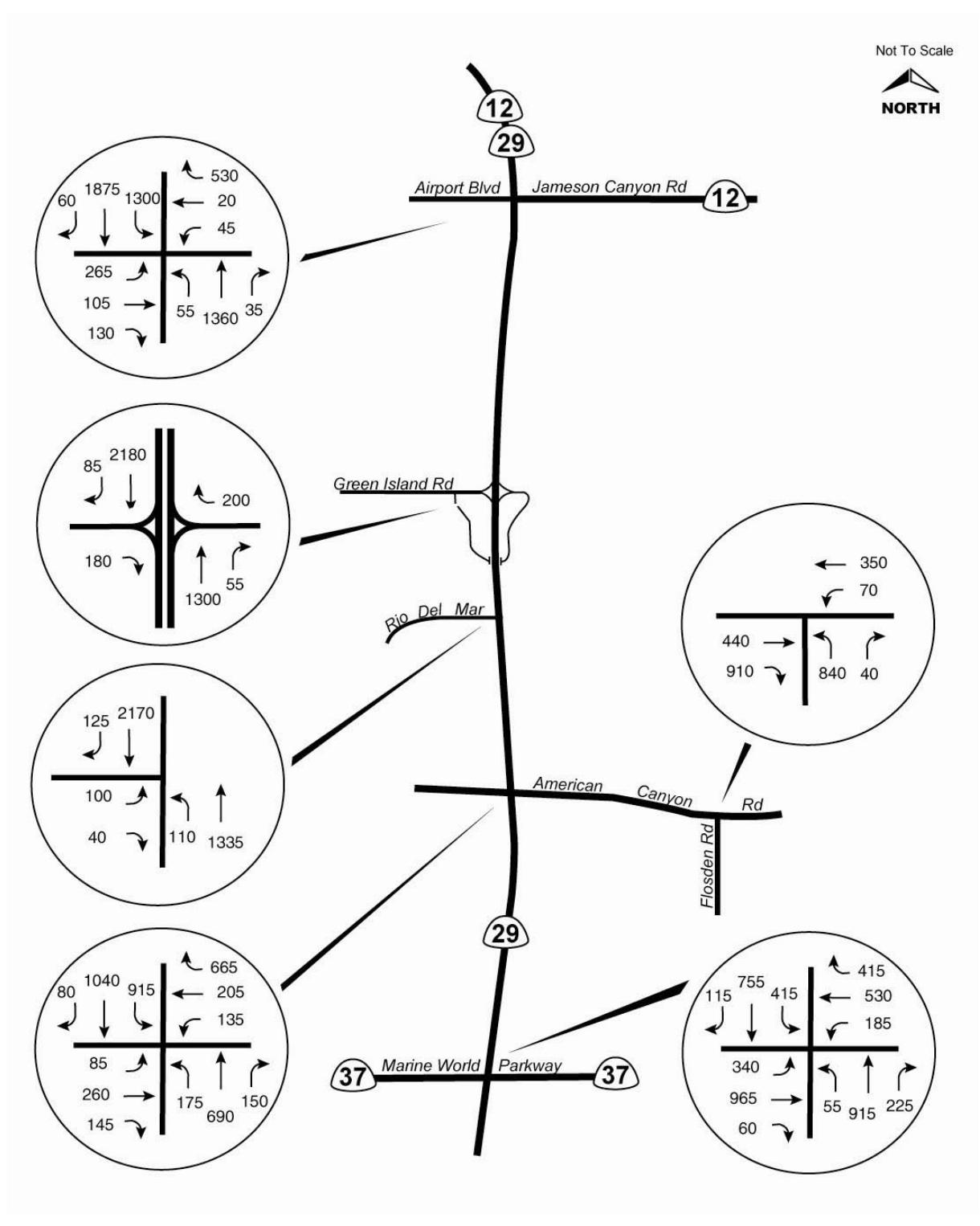
Green Island Road is a two-lane collector roadway serving light industrial/warehousing/manufacturing uses in the northwest section of American Canyon. It has a set of buttonhook ramps with the State Route 29 highway; the southbound ramps connect directly to Green Island Road and the northbound hook ramps are accessed via the Paoli Loop Road, a two-lane, poorly paved roadway extending under State Route 29 (in an underpass shared with a railroad).

EXHIBIT 9 AREA MAP



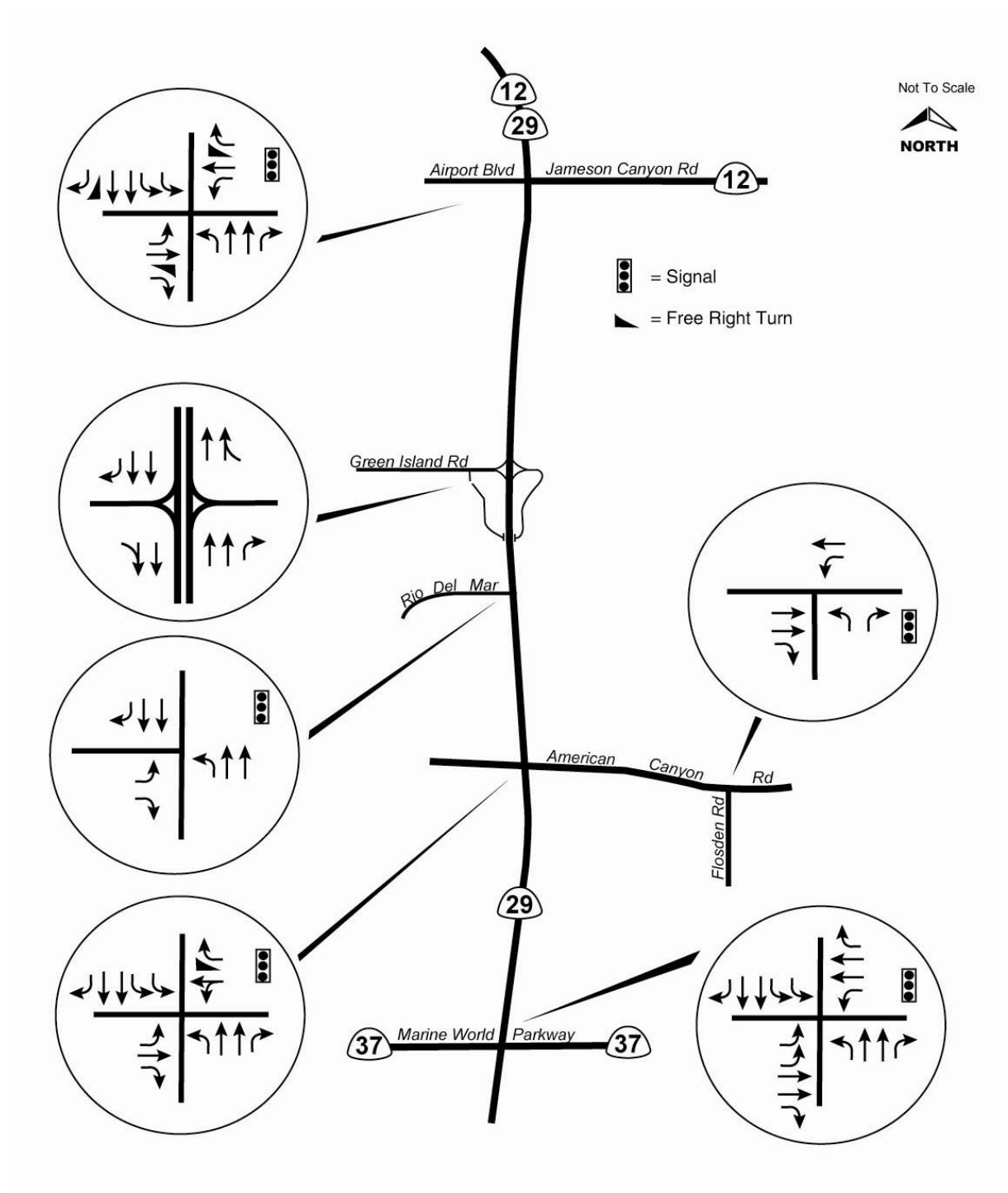
Source: Crane Transportation Group, September 2003

EXHIBIT 10 **EXISTING TURN MOVEMENT VOLUMES PM PEAK HOUR**



Source: Crane Transportation Group, September 2003

EXHIBIT 11
EXISTING LANE GEOMETRICS AND INTERSECTION CONTROL



Source: Crane Transportation Group, September 2003

EXHIBIT 12
INTERSECTION LEVEL OF SERVICE

INTERSECTION	EXISTING	YEAR 2010	
		BASE CASE	BASE CASE + SOI DVPT.
SR29/Airport Blvd./Jameson Canyon Rd (Signal)	F-83.4 ⁽¹⁾	F-169.5	F-182.6
SR29/Rio Del Mar Rd. (Signal)	B-11.9 ⁽¹⁾	F-94.9	F-136.9
SR29/American Canyon Rd. (Signal)	D-51.1 ⁽¹⁾	F-207.6	F-248.5
SR29/SR37 (Signal)	D-44.0 ⁽¹⁾	N/A	N/A
SR29/SR37 Westbound Ramps (Signal)	N/A	C-23.5	C-26.9
SR29/SR37 Eastbound Ramps (Signal)	N/A	B-15.3	B-14.9
American Canyon Rd./Flosden Rd. (Signal)	B-14.8 ⁽¹⁾	B-15.5	B-16.8

⁽¹⁾ Level of service—control delay in seconds

EXHIBIT 13
S.R. 29/GREEN ISLAND RD/PAOLI LOOP RD MERGE OPERATION

INTERSECTION	EXISTING	YEAR 2010	
		BASE CASE	BASE CASE + SOI DVPT.
Paoli Loop Rd. Northbound Merge to SR29 Expressway	B-58.2 ⁽¹⁾	C-56.0	D-53.9
Green Island Rd. Southbound Merge to SR29 Expressway	C-57.3 ⁽¹⁾	D-54.0	E-50.9

⁽¹⁾ Level of service for ramp-freeway (expressway) merge areas of influence—Space mean speed in influence area.

Source: Crane Transportation Group, September 2003. Year 2000 Highway Capacity Manual Analysis Methodology.

Flosden Road is a four-lane arterial roadway extending southerly from American Canyon Road into the City of Vallejo and an interchange with the State Route 37 freeway. It has a signalized intersection with American Canyon Road.

INTERSECTION OPERATION STUDY METHODOLOGY - SIGNALIZED INTERSECTIONS

Intersections, rather than roadway segments between intersections, are almost always the capacity controlling locations for any circulation system. Signalized intersection operation is graded based upon two different scales. The first scale employs a grading system called Level of Service (LOS) which ranges from Level A, indicating uncongested flow and minimum delay to drivers, down to Level F, indicating significant congestion and delay on most or all intersection approaches. The Level of Service scale is also associated with a control delay tabulation (year 2000 Transportation Research Board (TRB) *Highway Capacity Manual* [HCM] operations method) at each intersection. The control delay designation allows a more detailed examination of the impacts of a particular project. Greater detail regarding the LOS/control delay relationship is provided in Appendix 3.

Studied Intersections Weekday PM peak period counts (4:00-6:00 PM) were conducted by Crane Transportation Group on April 30, 2003 or were obtained from a recent study for American Canyon Road¹⁷ at the following locations.

- State Route 29/Jameson Canyon Road (State Route 12)/Airport Boulevard (signal)
- State Route 29/Green Island Road-Paoli Loop Road Hook Ramps
- State Route 29/Rio Del Mar Road (signal)
- State Route 29/American Canyon Road (signal)
- State Route 29/State Route 37 (signal)
- American Canyon Road/Flosden Road (signal)

Resultant existing PM peak hour volumes are presented in Exhibit 10.

Standards of Significance The minimum acceptable intersection operation level of service for the six intersections are listed below:

American Canyon

- State Route 29/Green Island Road-Paoli Loop Road Hook Ramps **LOS D**
- State Route 29/Rio Del Mar Road (signal) **LOS D**
- State Route 29/American Canyon Road (signal) **LOS E**
- American Canyon Road/Flosden Road (signal) **LOS E**

Napa County

- State Route 29/Jameson Canyon Road (State Route 12)/Airport Boulevard **LOS E**

City of Vallejo

- State Route 29/State Route 37 intersection **LOS D**

¹⁷ Counts by Korve Engineering, June/August or October 2002.

Existing Intersection Operation Exhibit 11 shows existing approach lanes and control at intersections evaluated in this study. Exhibit 12 shows that currently during the weekday PM peak hour all analyzed intersections are operating acceptably, with one exception. State Route 29/Jameson Canyon Road (State Route 12)/Airport Boulevard is operating unacceptably at LOS F.

RAMP MERGE OPERATION STUDY METHODOLOGY

Analysis has been conducted in this study of operating conditions at the Green Island Road/Paoli Loop Road on-ramp merge locations with the State Route 29 expressway. Year 2000 TRB Highway Capacity Manual software has been used for the evaluation. Operating conditions are presented as a level of service and mean speed in the merge area.

Standards of Significance The City of American Canyon uses LOS D as the poorest acceptable operation at all locations with the exception of select locations along American Canyon Road. Therefore, LOS D is considered the poorest acceptable operation for the on-ramp merge areas.

Geometrics Exhibit 11 shows existing geometrics at the Green Island Road/Paoli Loop Road/State Route 29 hook ramps. Currently, the northbound on-ramp has an acceleration length of 640 feet, while the southbound on-ramp has an acceleration length of 560 feet. State Route 29 begins an ascent to a bridge crossing the Paoli Loop Road and a railroad just south of the southbound on-ramp merge area. A guardrail is provided along the west side of State Route 29 starting 200 feet south of the end of the southbound on-ramp merge.

Existing Ramp Merge Operation Exhibit 13 shows that currently during the weekday PM peak hour both on-ramp merge areas operate acceptably, with the northbound on-ramp merge at LOS B and the southbound on-ramp merge at LOS C.

PLANNED IMPROVEMENTS

Caltrans is currently extending the State Route 37 freeway from just west of the Flosden Road interchange to the State Route 37 bridge across the Napa River. An interchange is planned to the north of the existing State Route 29/37 intersection, although the existing intersection will be maintained and will function as the freeway's eastbound off-ramp connection to State Route 29. A new westbound off-ramp signalized intersection with State Route 29 will be constructed as part of the project. This improvement is scheduled to be completed by 2005.¹⁸

Caltrans has also scheduled improvements to the State Route 29/Jameson Canyon Road (State Route 12)/ Airport Boulevard intersection by 2005. Measures will include a third State Route 29 northbound through lane (which will extend to the existing third northbound lane at North Kelly Road), lengthening the two left turn lanes on the southbound State Route 29 intersection approach, and additional east and westbound approach lanes.¹⁹

American Canyon is planning several improvements by 2020. This includes extension of Flosden Road north of American Canyon Road to serve a new middle school and new subdivision and widening all approaches to the Flosden Road/American Canyon Road intersection. This

¹⁸ Mr. Tanner Aksu, Vallejo City Traffic Engineer, personal communication, July 2003.

¹⁹ Mr. Don Ridenhauer, Napa County Assistant Public Works Director, personal communication, April 2003.

improvement, along with the development along Flosden Road north of American Canyon Road, has been assumed in place by 2010. The city has adopted a plan to widen American Canyon Road to four lanes using funds from the city's Traffic Mitigation Fee program. This program is expected to begin after the State Route 29/37 interchange is complete.²⁰ It is unknown at this time if the improvements will take place prior to 2010. The signalized Rio Del Mar intersection with State Route 29 is expected to be replaced with a new signalized intersection of Eucalyptus Drive and State Route 29 (Eucalyptus Drive is scheduled for realignment on the westerly side of State Route 29). This is scheduled for construction within the next four to five years, and thus could be completed by 2010.²¹ The analysis provided below assumes the Rio Del Mar intersection is still in place in 2010, however the analysis is applicable to its replacement intersection.

YEAR 2010 BASE CASE (WITHOUT SOI-AREA DEVELOPMENT) CONDITIONS

A year 2010 planning horizon has been selected for analysis purposes by Napa LAFCO as it matches American Canyon's current general plan buildout year.

Base Case Traffic Volumes Year 2010 PM peak hour volumes were projected in American Canyon's 1992 General Plan EIR analysis for select locations within the city, including the State Route 29/American Canyon Road and American Canyon Road/Flosden Road intersections as well as at the State Route 29/Green Island Road-Paoli Loop Road ramps. These projections included buildout of the American Canyon 1992 General Plan. However, no projections were provided for the State Route 29 intersections with Jameson Canyon Road, Rio Del Mar or the State Route 37 freeway. Due to the age of this data, more current future PM peak hour traffic projections were obtained from the following sources.

- Solano Transportation Authority (STA) year 2010 PM peak hour projections have recently (August 2003) been developed for Solano County and southern Napa County including the State Route 29 corridor through American Canyon, the State Route 29/Jameson Canyon Road intersection and the American Canyon/Flosden Road intersection.²² The STA projections assume no Flosden Road intersection north of American Canyon Road.
- City of Vallejo traffic model 2020 PM peak hour projections have recently been updated for the State Route 29/State Route 37 interchange.
- City of American Canyon traffic analysis for the American Canyon Road corridor east of State Route 29 has recently been completed by Kolve Engineering. Analysis indicates volumes reflect a 2020 horizon and include a list of projects within American Canyon and nearby County areas. However, review of the project list for this study indicates that a majority of approved and proposed developments at the Napa Airport Industrial Center have not been included in the evaluation. The Kolve study assumes Flosden Road is extended north of American Canyon Road, with an ill-defined connection to State Route 29 south of the Rio Del Mar intersection.

²⁰ Email Communication to Dan Schwarz, *op.cit.*, from Ed Haworth, *op. cit.*, January 22, 2004.

²¹ *Ibid.*

²² STA 2030 projections have recently been approved by Caltrans for upcoming Project Study Report (PSR) analysis of a future interchange at the SR29/Jameson Canyon Road intersection.

After review of the above sources, a 2010 system of volumes was developed for all study intersections using the STA projections as primary guidance for the State Route 29 intersections from Jameson Canyon Road to American Canyon Road, with the City of Vallejo projections adjusted to 2010 conditions being utilized for the volume projections at the State Route 29/State Route 37 interchange. Both the STA and City of Vallejo traffic model projections included full buildout of the 1992 *American Canyon General Plan*. The Kolve projections were utilized to project volumes to/from Flosden Road north of American Canyon Road.

Resultant year 2010 PM peak hour Base Case (without future SOI-area development) volumes are presented in Exhibit 14.

Geometrics and Control Exhibit 15 presents expected geometrics and control to be in place for 2010 Base Case conditions at each analyzed location. An overpass system is proposed to be constructed at the State Route 29/State Route 37 intersection.

Year 2010 Base Case (without future SOI-area development) Intersection Operation Exhibit 12 shows that by 2010 the following intersections would be expected to experience unacceptable Base Case (without future SOI-area development) operation.

- State Route 29/Jameson Canyon Road/Airport Boulevard—LOS F
- State Route 29/Rio Del Mar Road—LOS F
- State Route 29/American Canyon Road—LOS F

Acceptable operation would be expected at both signalized intersections within the State Route 29/State Route 37 interchange and at the American Canyon Road/Flosden Road intersection.

Year 2010 Base Case (without future SOI-area development) Green Island Road/Paoli Loop Road On-Ramp Merges to State Route 29 Exhibit 13 shows that the north and southbound merges from the Green Island Road/Paoli Road hook on-ramps would both be operating at acceptable levels of service during the PM peak traffic hour with 2010 Base Case volumes: northbound merge at LOS C and southbound merge at LOS C.

FUTURE SOI-AREA DEVELOPMENT TRIP GENERATION

Potential development anticipated by the year 2010 in the four SOI areas is outlined in Exhibit 3. As shown in Exhibit 17, the anticipated future SOI-area development would entail the following development and net new PM peak hour trip generation.

- SOI Area 1: American Canyon Road/Flosden Road
Add 1,000-student high school
[net new 60 inbound and 90 outbound trips]
- SOI Area 2: Watson Lane
No new development assumed
- SOI Area 3: Green Island Road
Add 1,437,000 square feet of industrial park (warehousing/light industrial/manufacturing)
[net new 273 inbound and 1,049 outbound trips]

- SOI Area 4: Eucalyptus Groves
Add 80 acres of park (undeveloped, passive uses)
[net new 18 inbound and 18 outbound trips]

SOI-Area Trip Distribution Traffic to/from the Green Island Road industrial area was distributed to the local roadway network based upon existing and projected 2010 distribution of traffic at the State Route 29/Green Island Road-Paoli Loop Road ramps in the STA traffic model. New high school and park traffic uses were distributed to the local roadway network based upon local and population distribution within American Canyon. Exhibit 18 presents year 2010 Base Case plus traffic anticipated from future development in the SOI areas distributed to the local roadway network.

SIGNIFICANCE CRITERIA

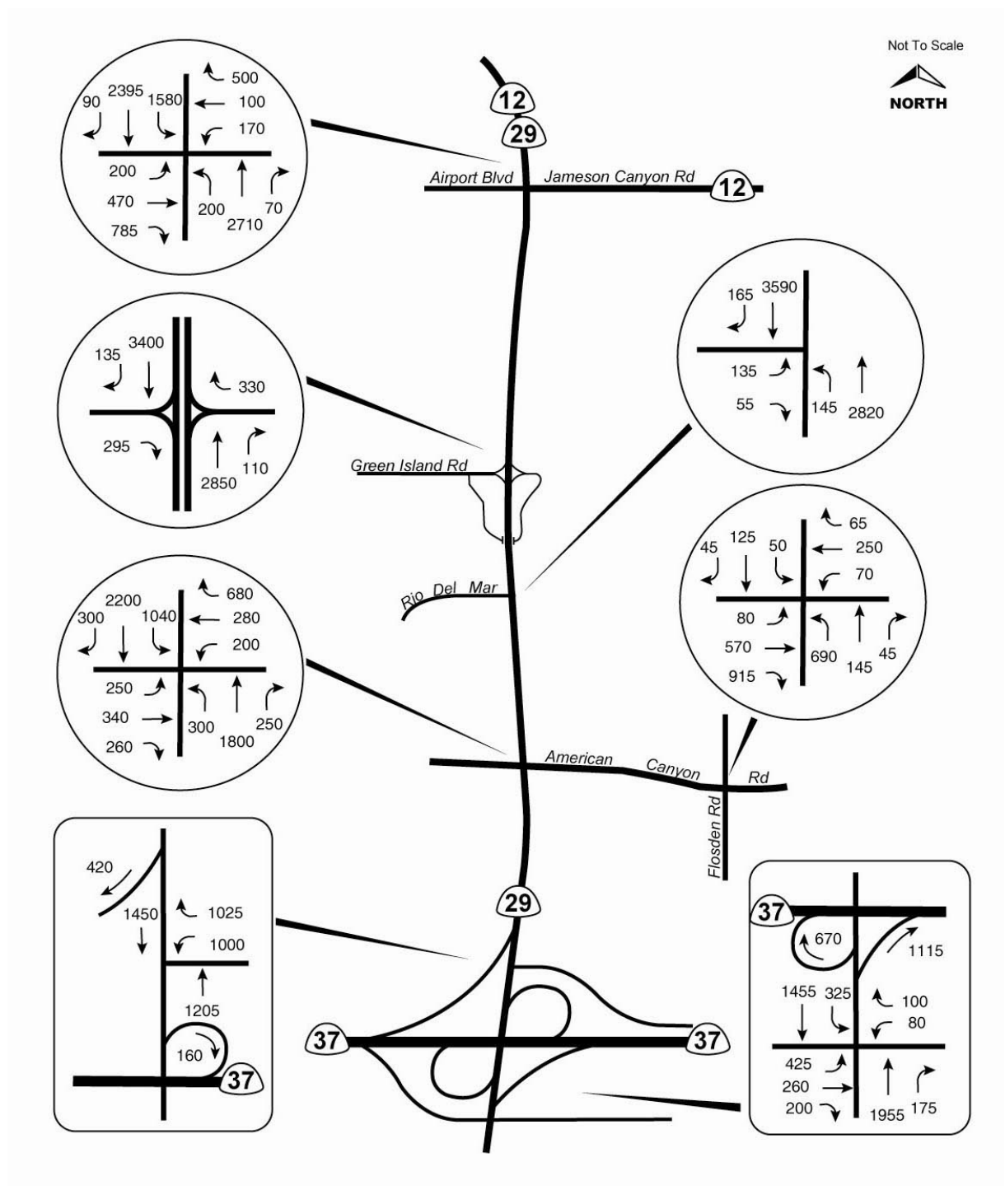
An impact is considered to be significant at the State Route 29/Jameson Canyon Road intersection, State Route 29/American Canyon Road and American Canyon Road/Flosden Road intersections if any of the following conditions are met:

- If a signalized intersection with Base Case (without SOI-area traffic) volumes is operating at LOS A, B, C, D or E and deteriorates to LOS F operation with the addition of traffic anticipated from future SOI area development, the impact is considered significant and would require mitigation.
- If the Base Case LOS at a signalized intersection is already at LOS F, an increase in traffic passing through the intersection of one (1) percent or more due to the traffic anticipated from future SOI area development is considered to be significant and would require mitigation.

An impact is considered to be significant at the State Route 29/State Route 37 intersection, State Route 29/Rio Del Mar intersection or State Route 29/Green Island Road-Paoli Loop Road ramps if any of the following conditions are met:

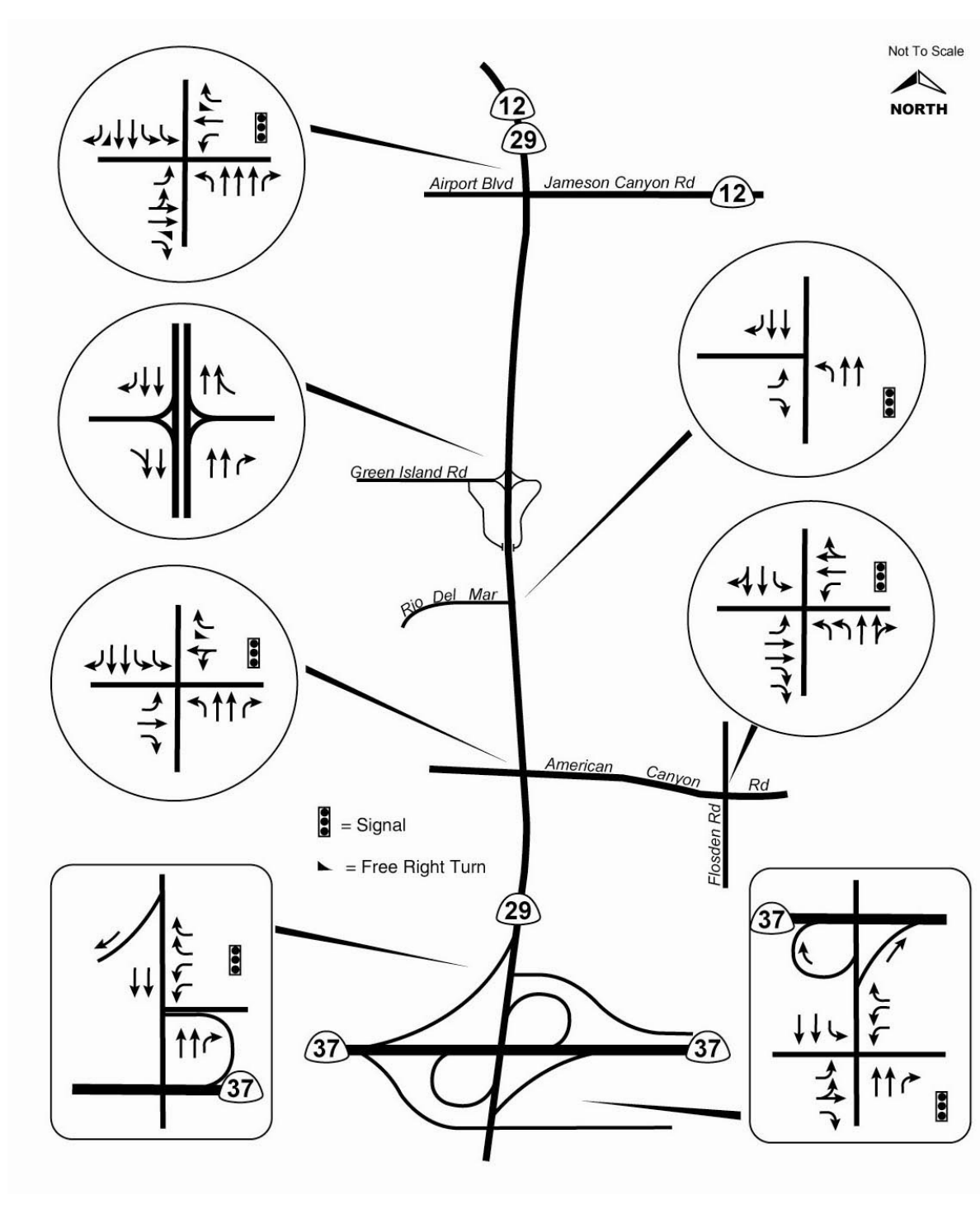
- If a signalized intersection or on-ramp merge area with Base Case (without SOI-area traffic) volumes is operating at LOS A, B, C or D and deteriorates to LOS E or F operation with the addition of traffic from the SOI areas, the impact is considered significant and would require mitigation.
- If the Base Case LOS at a signalized intersection or on-ramp merge area is already at LOS E or F, an increase in traffic passing through the intersection or on-ramp merge area of one (1) percent or more due to the traffic anticipated from future SOI area development is considered to be significant and would require mitigation.

EXHIBIT 14
2010 BASE CASE WITHOUT SOI-AREA DEVELOPMENT
TURN MOVEMENT VOLUMES



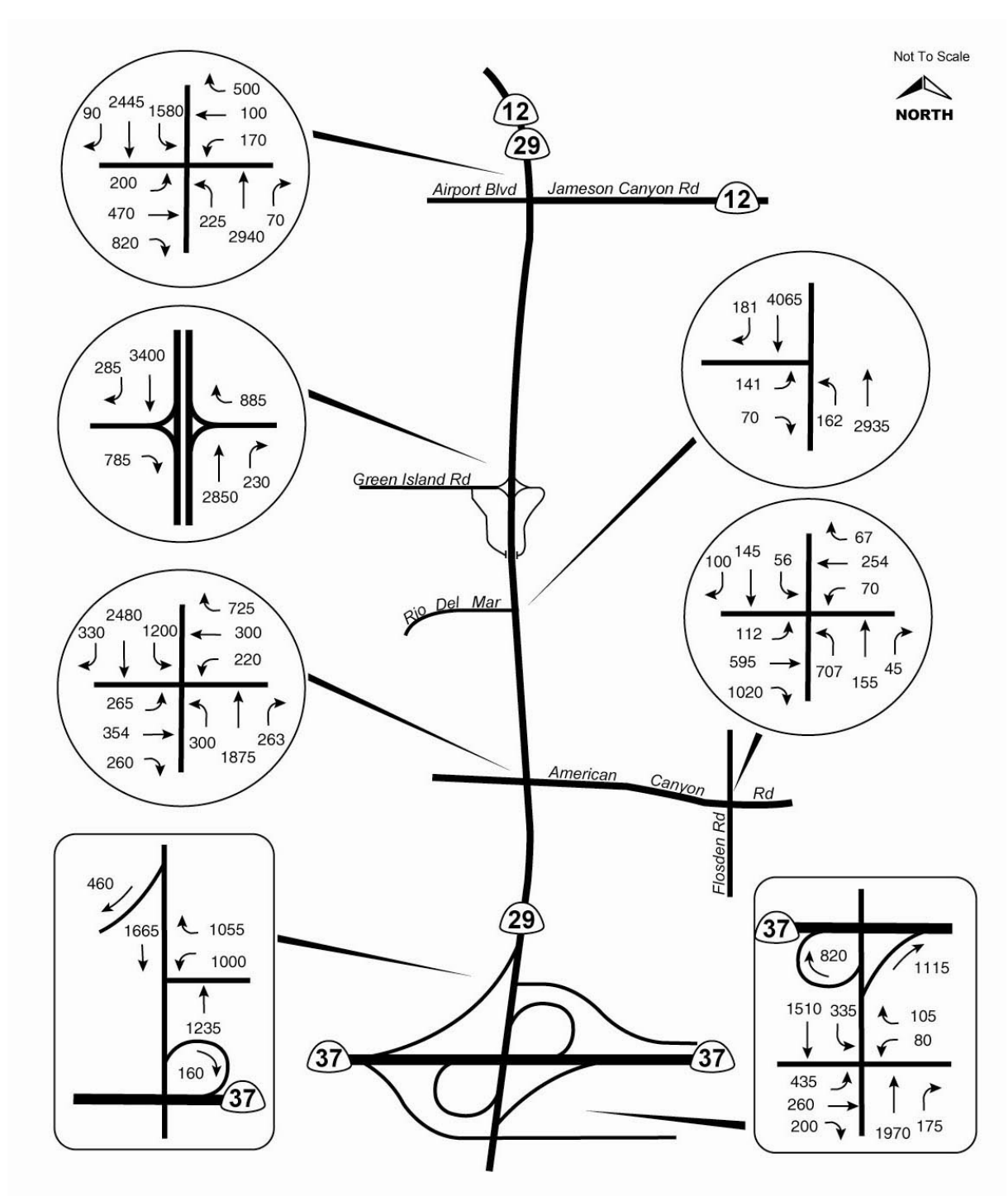
Source: Crane Transportation Group, September 2003

EXHIBIT 15
2010 LANE GEOMETRICS AND INTERSECTION CONTROL



Source: Crane Transportation Group, September 2003

EXHIBIT 16 2010 BASE CASE PLUS SOI-AREA DEVELOPMENT TURN MOVEMENT VOLUMES



Source: Crane Transportation Group, September 2003

EXHIBIT 17
SOI-AREA DEVELOPMENT TRIP GENERATION

SOI AREA	USE	SIZE	DAILY 2-WAY TRIPS		PM PEAK HOUR TRIPS			
					INBOUND		OUTBOUND	
			RATE	VOL	RATE	VOL	RATE	VOL
1. American Canyon Rd./Flosden Rd.	High School	1,000 students	1.79	1,790	.06	60	.09	90
2. Watson Lane	No use	—	—	0	—	0	—	0
3. Green Island Road	Industrial Park	1,437,000 sq.ft..	6.96	10,002	.19	273	.73	1,049
4. Eucalyptus Groves	Park ⁽¹⁾	80 acres	5	400	.23	18	.22	18

(1) Assumes undeveloped passive use.

Trip Rate Source: Trip Generation, 6th Edition, by the Institute of Transportation Engineers, 1997. Traffic Generators: San Diego Association of Governments, 2002. Compiled by: Crane Transportation Group

1. *Would the project cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (that is, result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Exhibit 12 shows that total traffic from the four sphere of influence areas would significantly affect the three intersections projected to be experiencing unacceptable PM peak hour Base Case LOS F operation.

- **State Route 29/Jameson Canyon Road (State Route 12)/Airport Boulevard** PM Peak traffic would be increased by more than one (1) percent (3.7 percent) with Base Case LOS F operation. Virtually all of the impact at this intersection would be due to the Green Island Road sphere of influence area development.
- **State Route 29/Rio Del Mar Road** PM peak traffic would be increased by more than one (1) percent (9.3 percent) with Base Case LOS F operation. About 95 percent of the impact at this intersection would be due to the Green Island Road sphere of influence area development. (As discussed above, this intersection may be replaced with a State Route 29/Eucalyptus Drive intersection. Similar LOS impacts would result from SOI Area 3 development).
- **State Route 29/American Canyon Road** PM Peak traffic would be increased by more than one (1) percent (8.8 percent) with Base Case LOS F operation. About 84 percent of the impact at this location would be due to the Green Island Road sphere of influence area development.

Measures to reduce impacts from future SOI-area development involving the addition of turn lanes and changes to signal phasing are available at the State Route 29/Jameson Canyon Road and State Route 29/American Canyon Road intersections, as discussed below.

(i) State Route 29/Jameson Canyon Road (State Route 12)/Airport Boulevard The County and Caltrans are planning an interchange at this location before 2025, but not by 2010. This major improvement would be required to provide acceptable Base Case and Base Case + SOI-area traffic. However, improvements which could mitigate Base Case + SOI-area operation to Base Case conditions are as follows:

- Add one additional lane to the westbound Jameson Canyon Road approach. Stripe for combined left/through movements.
- Add one additional lane to the eastbound Airport Boulevard approach. Stripe for combined left/through movements.
- Provide for east-west split signal phasing.

(ii) State Route 29/American Canyon Road Improvements which could mitigate Base Case + SOI-area traffic operation to Base Case conditions are as follows:

- Widen the westbound American Canyon Road approach to provide one left turn lane and one through lane in addition to the existing free right turn lane.

(iii) State Route 29/Rio Del Mar Road There are no additions of turn lanes or other minor changes possible at the State Route 29/Rio Del Mar intersection to reduce the impact to a less-than-significant level. Widening of State Route 29 to six lanes or the extension of Flosden Road north of American Canyon Road to intersect State Route 29 north of or at Green Island Road would be required to provide acceptable operation and/or reduce the impact to a less-than-significant level. In the past, American Canyon has expressed no interest in widening State Route 29 to six lanes through the city. The extension of Flosden Road to the north (to South Kelly Road), however, is called for in the *American Canyon General Plan* and has been recently presented in the Napa Junction Mixed Use Development Traffic Study²³ as a likely near- or mid-term horizon improvement that will be implemented by the City of American Canyon. This document also presents the anticipated near- or mid-term horizon improvement of extending Devlin Road south to Green Island Road and the continuation of a second parallel route to State Route 29 in American Canyon on the west side of the city (named Commerce Way and Wetlands Edge Road).

In addition, the Napa Junction traffic study also proposes elimination of the State Route 29/Rio Del Mar signalized intersection (to be replaced by allowing southbound right turns to/from State Route 29 only) and creation of a new signalized intersection just to the north at the proposed connection of Eucalyptus Drive to State Route 29 (at the southerly entrance to the proposed Napa Junction project). The traffic study conducted for the Napa Junction project indicates that the State Route 29/Eucalyptus Drive intersection could be mitigated to work acceptably with General Plan buildout traffic²⁴ and no widening of State Route 29 to six lanes if the two new parallel routes (Flosden Road and Wetlands Edge Road-Commerce Way-Devlin Road) are fully completed. Therefore, with completion of Flosden Road north to South Kelly Road, a connection from Green Island Road to Flosden Road, and the completion of the Devlin Road-Commerce Way-Wetlands Edge Road alternate route on the west side of American Canyon, the impacts of the SOI projects (primarily from the Green Island Road SOI area) at the State Route 29/Rio Del Mar intersection (or its replacement intersection: State Route 29/Eucalyptus Drive) could be mitigated to a less-than-significant level.

Traffic resulting from anticipated SOI-area development would not result in unacceptable operation or significant impacts at the State Route 29/State Route 37 interchange or at the American Canyon Road/Flosden Road intersection.

The change in the SOI would not directly lead to the traffic impacts discussed above, but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. However, as shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus a similar level of traffic impacts would be expected. The significant effects on American Canyon intersections

²³ Korve Engineering, September 16, 2003.

²⁴ Including full development in the three SOI areas, per LAFCO staff.

described above result almost entirely from SOI Area 3 development. The 18 peak hour trips associated with the anticipated recreational land use in the Eucalyptus grove SOI area would not in and of itself result in significant effects on the studied intersections. Traffic impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

2. *Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Exhibit 13 shows that traffic from the Green Island Road sphere of influence area is projected to result in unacceptable PM peak hour operation of the southbound State Route 29 on-ramp merge area from Green Island Road. The southbound On-Ramp Merge would change operation from LOS D to LOS E. The northbound on-ramp merge would have acceptable LOS D Base Case plus project operation. The following measure could reduce the impact to the southbound On-Ramp Merge from future SOI-area development:

- Increase the length of the southbound on-ramp acceleration lane by 200 feet. The resultant Base Case plus Project PM Peak operation would be LOS D.

The change in the SOI would not directly lead to an unacceptable PM peak hour operation of the southbound State Route 29 on-ramp merge area from Green Island Road, but would indirectly lead to such an impact should the areas be annexed to the City of American Canyon and development occur. However, as shown in Exhibit 3, anticipated land uses in the SOI Area 3 are similar whether under county or city jurisdiction and thus a similar level of traffic impacts would be expected. Therefore, project implementation would not result in significant impact on an established level of service standard. Traffic impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

3. *Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The project would not affect air traffic patterns (see also Checklist Items G.5 and G.6). Thus, there would be no impact.

4. *Would the project substantially increase hazards due to a design feature (such as sharp curves or dangerous intersections) or incompatible uses (such as farm equipment)?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Future land uses and development designs within the SOI areas, and thus potential incompatible uses or hazardous design features, are unknown at this time and the potential for impact cannot be determined. The change in the SOI would not directly lead to the traffic

hazard impacts, but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. Traffic hazard impacts associated with future development will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

5. *Would the project result in inadequate emergency access?*

- ☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Future land uses and development designs within the SOI areas, and thus potential for inadequate emergency access is unknown at this time and the potential for impact cannot be determined. The change in the SOI would not directly lead to inadequate emergency access associated with future development, but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. Adequate emergency access will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage.

6. *Would the project result in inadequate parking capacity?*

- ☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Anticipated development within the SOI areas could result in a significant demand for additional parking, in particular, development along Green Island Road in SOI Area 3 and development of the 1,000 student high school in SOI Area 1. The change in the SOI would not directly lead to inadequate parking, but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. Adequate parking will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or by the City of American Canyon either at the rezoning stage prior to annexation or at the project approval stage. Future development within the city would be subject to the provisions of Chapter 19.21 of the City of American Canyon Zoning Ordinance. Table P-1 of the ordinance defines the required parking spaces for the various land uses.

7. *Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (such as bus turnouts, bicycle racks)?*

- ☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

The change in the SOI would not result in a conflict with adopted policies, plans, or programs supporting alternative transportation. Further, *American Canyon General Plan* Policies 4.8.1 through 4.8.12 make recommendations for pedestrian and bicycle access within the city. Figure 4-7 of the General Plan identified potential hike/bike trail alignments. These alignments are adjacent to or traverse all four to the SOI areas. Expansion of the SOI area would not result in a conflict with the General Plan with regard to planned pedestrian and bike alignments. Inclusion in the city's SOI and eventual annexation would facilitate implementation of these General Plan goals.

Transportation / Traffic Conclusions The proposed SOI area changes would not result in significant traffic impacts.

P. Utilities and Service Systems

Wastewater The City of American Canyon currently provides wastewater collection, treatment, and disposal services for all residential, commercial, and industrial developments within the four SOI expansion areas. Current flow is approximately 1.1 to 1.3 million gallons per day (mgd). Any further development in the SOI expansion areas would increase the demand for wastewater treatment. In 2002, the city brought a new wastewater treatment facility online capable of treating an average dry-weather flow of 2.57 mgd and a peak wet-weather flow of 5.0 mgd. This capacity was designed to accommodate the projected demand for current and future development throughout the service area, which is projected to be 2.47 mgd (average dry-weather flow) and 5.0 mg (peak wet-weather flow), and included development in the four SOI expansion areas.²⁵

Water All four SOI expansion areas are currently within the city's water service area, which extends south from Soscol Creek to Solano County and the Napa River. Areas 1, 2, and 3 and part of Area 4 are currently served by the City of American Canyon. There are also currently some wells on properties in the SOI expansion areas. Development in the SOI expansion areas upon annexation to the city would connect with the city water services.

The city's water supply is based on contracted entitlements with two outside sources: the State Water Project (SWP) and the City of Vallejo. American Canyon's contracted water supply in 2010 would be 6,078.6 acre feet per year. This amount is generated from three contracted water entitlements for the year 2010: the State Water Project for 4,950 acre feet; the City of Vallejo for 628.6 acre feet;²⁶ and City of Vallejo "Permit Water" for 500 acre feet. Due to the realities of entitlements, it is reasonable to expect that this amount will not be fully available to American Canyon. American Canyon must continue to objectively differentiate between entitlements and actual deliveries. In 2002 the city delivered approximately 2,832 acre feet of potable water to 3,722 service connections. Projected build-out water demands for American Canyon's entire water service area is 6,223.25 acre feet, and includes water demands anticipated for all four SOI expansion areas.²⁷ To help reduce future water demands, the city is scheduled to begin providing reclaimed water service within the next year as part of its comprehensive reclamation project. The city anticipates the project will result in annual savings of approximately 1,000 acre-feet in potable water demands.

The American Canyon Water Treatment Plant, located in Jameson Canyon, has the ability to treat 2.6 million gallons of water per day. Pursuant to its *Water System Master Plan*²⁸, American

²⁵ City of American Canyon Wastewater Treatment and Reclamation Project, Redesign Report, Dames & Moore, November 1997 and Nichols Berman conversation with Keene Simonds, Analyst, LAFCO of Napa County, October 30, 2003.

²⁶ Note: American Canyon has the right to increase this amount to 3,205.86 acre feet by purchasing additional capacity from Vallejo over the course of specified time periods.

²⁷ *Water System Master Plan*, op.cit.

²⁸ Ibid.

Canyon has scheduled two phased improvements to its Jameson Water Treatment Plant by the year 2004 that will more than triple its current treatment capacity to 8.6 million gallons per day. Although these two improvements will not enable American Canyon to independently meet its projected maximum day water demand of 11.1 mgd at buildout, additional capacity expansion is being planned for a future study. In addition, American Canyon's contract for potable water with Vallejo includes a provision allowing the city to convey raw water for treatment at Vallejo's treatment facilities.

Treated water storage facilities include four reservoir tanks with a cumulative storage capacity of 4.704 million gallons. Pursuant to its *Water System Master Plan*, American Canyon is scheduled to construct three new treated storage tanks by the year 2007 that will provide sufficient storage capacity to meet its projected demand at buildout of 11.8 mg (storage capacity after the construction of the three new tanks would be 11.9 million gallons).

Solid Waste Solid waste collection services in the City of American Canyon and surrounding areas is contracted through a franchise with the Napa Garbage Service, a private enterprise. In the spring of 2003, the city entered a 10-year franchise agreement with the Napa Garbage Service to provide solid waste management for the city.²⁹ The city's solid waste is collected at the Devlin Road Transfer Station before being sent to the Keller Canyon Landfill in Contra Costa County. The city currently has a recycling program which includes curb-side pick-up of cans, plastic, glass, and paper.

1. *Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☒ Less-Than-Significant Impact ☐ No Impact

As discussed above, the city brought a new wastewater treatment facility online in 2002 capable of treating an average dry-weather flow of 2.57 mgd and a peak wet-weather flow of 5.0 mgd. This capacity was designed to accommodate projected demand at buildout for current and future new development throughout the service area, which is expected to be 2.47 mgd (average dry-weather flow) and 5.0 mg (peak wet-weather flow), and includes development in the four SOI expansion areas. Additionally, at its August 14, 2003 meeting, LAFCO of Napa County determined that "The City of American Canyon's new wastewater treatment plan holds the promise of expanded capacity that will serve the current future needs of south Napa County." Therefore, the anticipated development in the four SOI areas would not cause the wastewater treatment plant to exceed wastewater treatment requirements. The proposed SOI changes and eventual development within the City of American Canyon would result in a less-than-significant impact on city wastewater facilities.

2. *Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☒ Less-Than-Significant Impact ☐ No Impact

²⁹ Comprehensive Study of American Canyon: Service Review, LAFCO of Napa County, April 2003.

Water As discussed above, pursuant to its *Water System Master Plan*, American Canyon has scheduled two phased improvements to its Jameson Water Treatment Plant by the year 2004 that will more than triple its current treatment capacity from 2.6 mgd to 8.6 mgd. Although these two improvements will not enable American Canyon to independently meet its projected maximum day water demand of 11.1 mgd at buildout, additional capacity expansion is being planned for a future study. In addition, American Canyon's contract for potable water with Vallejo allows the city to convey raw water for treatment at Vallejo's treatment facilities. Further, the city is scheduled to construct three new treated storage tanks by the year 2007 that will provide sufficient storage capacity to meet its projected storage demand at buildout of 11.8 mg (storage capacity after the construction of the three new tanks would be 11.9 million gallons). Therefore, the combination of raw water treated by the city's water treatment plant and potable water purchased under contract from Vallejo would meet American Canyon's projected treated water demand. No further facilities improvements would be required as a result of development in the SOI areas. Accordingly, the SOI changes and eventual development within the City of American Canyon would result in a less-than-significant impact on city water facilities.

Wastewater As discussed above under Checklist Item P.1, the recently constructed Wastewater Treatment Plant has sufficient capacity to accommodate projected development in the SOI areas. Therefore, no improvements to the wastewater treatment facilities would be required as a result of this project.

3. *Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Same as Checklist Items H.4 and H.5 (Hydrology and Water Quality).

4. *Would the provider have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☒ Less-Than-Significant Impact ☐ No Impact

Extensive studies have been undertaken by LAFCO to determine the availability of water for current and future development in American Canyon. These studies have taken into account potential development in the four SOI expansion areas, and have determined that sufficient water supplies would be available from existing entitlements and agreements. In addition, based on these reports LAFCO determined that, through its contractual agreements, the City of American Canyon has available an adequate supply of imported water to meet projected system demands for its service area under normal conditions at buildout.³⁰ American Canyon's service area includes all four SOI study areas. Based on this determination, the SOI

³⁰ *Comprehensive Water Service Study, Service Review Determinations*, Local Agency Formation Commission of Napa County, December 11, 2003 (adopted); *City of American Canyon Water System Master Plan*, HydroScience Engineers, Inc, February 2003; and Nichols Berman conversation with Keene Simonds, Analyst, LAFCO of Napa County October 30, 2003.

changes and eventual development within the City of American Canyon would result in a less-than-significant impact on city water supply.

5. *Would the project result in the determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☒ Less-Than-Significant Impact ☐ No Impact

Same as Checklist Items P.1 and P.2.

6. *Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☒ Less-Than-Significant Impact ☐ No Impact

In the spring of 2003, the City of American Canyon entered a 10-year franchise agreement with Napa Garbage Service to provide solid waste management for the city.³¹ The city's solid waste is collected at the Devlin Road Transfer Station before being sent to the Keller Canyon Landfill in Contra Costa County. The Keller Canyon Landfill has a 40 year permit.³² For this reason, the city's future solid waste disposal needs are expected to be met, including those resulting from additional development in the SOI areas. The SOI changes and eventual development within the City of American Canyon would result in a less-than-significant impact on city solid waste disposal needs.

7. *Would the project comply with federal, State, and local statutes and regulations related to solid waste?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

In accordance with AP 939, the city has adopted *Source Reduction, Recycling Elements* and *Household Hazardous Waste Elements* (SRRE, HHWE) programs to meet the requirements of the California Integrated Waste Management Act. Solid waste projections for the year 2010 assume the requirement of AB 939 of a 50 percent diversion of solid waste would be met.³³ To this end, the City of American Canyon currently has a recycling program which includes curb-side pick-up of cans, plastic, glass, and paper. The proposed SOI changes and eventual development within the City of American Canyon would result in a less-than-significant impact on the implementation of federal, State and local statutes and regulations related to solid waste.

³¹ Comprehensive Study of American Canyon: Service Review, LAFCO of Napa County, April 10, 2003.

³² Nichols Berman conversation with Chuck Bowling, General Manager, Devlin Road Transfer Station, October 10, 2003.

³³ City of American Canyon General Plan EIR, page 3.4.3-4.

Utility and Service Systems Conclusions The project would result in less-than-significant utility and service system impacts.

Q. Mandatory Findings of Significance

1. *Does the project have the potential to degrade the quality of the environment substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Occurrences of several plant and animal species with special-status have been recorded from or are suspected to occur within the American Canyon vicinity. Additionally, wetlands and riparian areas may occur on the SOI area parcels. Biological assessments prior to development should be required in order to identify and provide mitigation for potential impacts to these sensitive biological resources. The proposed project (changes to the American Canyon SOI) would not directly lead to impacts on biological resources.

2. *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Development within the SOI areas would contribute to cumulative effects when other future development in the city is considered. For instance, the contribution of project-generated traffic would cumulatively impact American Canyon vicinity roadways. Cumulative air and water quality impacts and increased noise levels could result from SOI area development. However, the change in the SOI would not directly lead to impacts which could be cumulatively considerable, but would indirectly lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus a similar level of air quality, water quality, noise, and traffic impacts would be expected. The proposed project (changes to the American Canyon SOI) would not result in significant impact, thus cumulatively considerable impacts of future development arise independently of the project. Because the project is consistent with the *American Canyon General Plan*, no further analysis is required.

3. *Does the project have the environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

☐ Potentially Significant Impact ☐ Less-Than-Significant With Incorporation of Mitigation ☐ Less-Than-Significant Impact ☒ No Impact

Development within the SOI areas could have indirect adverse effects on area residents, such as construction-related air quality and noise impacts. However, the change in the SOI would not directly lead to impacts which could adversely effect human beings, but would indirectly

lead to such impacts should the areas be annexed to the City of American Canyon and development occur. As shown in Exhibit 3, anticipated land uses in the four SOI areas are similar whether under county or city jurisdiction and thus a similar level of impacts would be expected. Such impacts will be addressed by the appropriate land use authority at the time it is proposed in the unincorporated area, or at the rezoning stage prior to annexation, or at the project approval stage by the City of American Canyon. The proposed project (changes to the American Canyon SOI) would not result in impacts which could adversely effect human beings. No other adverse effects on human beings would be expected.

APPENDICES

APPENDIX 1

BIOLOGICAL RESOURCES REGULATORY FRAMEWORK

Local, State, and federal regulations have been enacted to provide for the protection and management of sensitive biological and wetland resources. On the federal level, the U.S. Fish and Wildlife Service (USFWS) is responsible for protection of terrestrial and freshwater organisms through implementation of the federal Endangered Species Act¹ and the Migratory Bird Treaty Act, and the National Marine Fisheries Service (NMFS) is responsible for protection of anadromous fish and marine wildlife. The U.S. Army Corps of Engineers (Corps) has primary responsibility for protecting wetlands under Section 404 of the Clean Water Act. At the state level, the California Department of Fish and Game (CDFG) is responsible for administration of the California Endangered Species Act, and for protection of streams and waterbodies through the Streambed Alteration Agreement process under Section 1601-1606 of the California Fish and Game Code. Certification from the California Regional Water Quality Control Board is also required when a proposed activity may result in discharge into navigable waters, pursuant to Section 401 of the Clean Water Act and EPA Section 404(b)(1) Guidelines.

Special-Status Species

Special-status species² are plants and animals that are legally protected under the State and/or federal Endangered Species Acts or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. Species with legal protection under the federal and State Endangered Species Acts often represent major constraints to development, particularly when they are wide ranging or highly sensitive to habitat disturbance and where proposed development would result in a “take” of these species. “Take” as defined by the federal Endangered Species Act (ESA) means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect” a threatened or endangered species. “Harm” is further defined by the USFWS to include the killing or harming of wildlife due to significant obstruction of essential behavior patterns (i.e. breeding, feeding, or sheltering) through significant habitat modifications or degradation. The CDFG also considers the loss of listed species habitat as “take”, although this policy lacks statutory authority and case law support under the California Endangered Species Act (CESA).

¹The federal Endangered Species Act (ESA) of 1973 declares that all federal departments and agencies shall utilize their authority to concern endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of the ESA and pertains to California species.

²Special-status species include:

- \$ Designated (rare, threatened, or endangered) and candidate species for listing by the CDFG;
- \$ Designated (threatened or endangered) and candidate species for listing by the USFWS;
- \$ Species considered to be rare or endangered under the conditions of Section 15380 of the California Environmental Quality Act Guidelines, such as those identified on lists 1A, 1B, and 2 in the 2001 *Inventory of Rare and Endangered Plants of California* by the California Native Plant Society (CNPS);
- \$ and possibly other species which are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on list 3 in the CNPS *Inventory* or identified as animal “California Species Concern” (CSC) species by the CDFG. Species designated as CSC have no legal protective status under the California Endangered Species Act but are of concern to the CDFG because of severe decline in breeding populations and other factors.

The primary information source on the distribution of special-status species in California is the California Natural Diversity Database (CNDDDB) inventory, which is maintained by the Wildlife and Habitat Data Analysis Branch of the CDFG. The CNDDDB inventory provides the most comprehensive state-wide information on the location and distribution of special-status species and sensitive natural communities. Occurrence data is obtained from a variety of scientific, academic, and professional organizations, private consulting firms, and knowledgeable individuals, and entered into the inventory as expeditiously as possible. The occurrence of a species of concern in a particular region is an indication that an additional population may occur at another location if habitat conditions are suitable. However, the absence of an occurrence in a particular location does not necessarily mean that special-status species are absent from the area in question; only that no data has been entered into the CNDDDB inventory. Detailed field surveys are generally required to provide a conclusive determination on presence or absence of sensitive resources from a particular location, where there is evidence of potential occurrence.

Federal Authority

The USFWS and NMFS have jurisdiction over species that are formally listed as threatened or endangered under the federal ESA. The federal ESA is a complex law enacted in 1973 to protect and recover plant and animal species in danger of becoming extinct and to conserve their ecosystems, with an ultimate goal being the recovery of a species to the point where it is no longer in need of protection. An “endangered” plant or animal species is one that is considered in danger of becoming extinct throughout all or a significant portion of its range. A “threatened” species is one that is likely to become endangered within the foreseeable future. The USFWS also maintains a list of species proposed for listing as endangered or threatened, and a list of candidate species for which sufficient information is available to support issuance of a proposed listing rule.

It is illegal to take any listed species without specific authorization. Any activity that could result in take of a federally-listed species requires a Section 10 take permit authorization from the USFWS or NMFS. Should another federal agency be involved with permitting the project, such as the Corps under jurisdiction of the Clean Water Act, Section 7 of the ESA requires the federal lead agency to consult with the USFWS and/or NMFS before permitting any activity that may result in take of a listed species. Section 9 of the ESA and its applicable regulations restrict certain activities with respect to endangered and threatened plants. However, these restrictions are less stringent than those applicable to fish and wildlife species. The provisions prohibit the removal of, malicious damage to, or destruction of any listed plant species from areas under federal jurisdiction.

In addition to the protection offered under the ESA, the federal Migratory Bird Treaty Act (MBTA) provides for protection of migratory bird species, birds in danger of extinction, and their active nests. It is illegal to possess or take any bird protected under the act without a depredation permit from the USFWS, which includes protection of eggs, young, and nests in active use. Although the MBTA technically provides for protection of most bird species, it is typically applied as a mechanism to protect active nests of raptors and colonial nesting species through the breeding and nesting season.

State Authority

The CDFG has jurisdiction over threatened or endangered species that are formally listed under the CESA. The CESA is similar to the federal ESA both in process and substance, providing additional protection to listed species in California. The CESA does not supersede the federal

ESA, but operates in conjunction, with some species having different listing status. The CESA is intended to conserve, protect, restore, and enhance listed species and their habitat. Compliance with the CESA is required when a take is considered likely by the CDFG.

The CDFG also maintains informal lists of “California Special Concern” (CSC) species. These species are broadly defined as animals that are of concern to the CDFG because of population declines and restricted distribution, and/or because they are associated with habitats that are declining in California. These species are inventoried in the CNDDDB, focusing on nesting, roosting, and congregation sites for non-listed species. In addition, wildlife species designated as “Fully Protected” or “Protected” may not be taken or possessed without a permit from the Fish and Game Commission and/or the CDFG.

The CESA prohibits the take of any plant listed as endangered, threatened, or rare. A “rare” plant species is one not presently threatened with extinction but may become endangered if its present environment worsens. State listing of plants began in 1977 with passage of the Native Plant Protection Act (NPPA). The CESA expanded upon the NPPA and enhanced legal protection for plants. To align with federal regulations, CESA created the categories of threatened and endangered species. It grandfathered all rare animals into the CESA as threatened species, but did not do so for rare plants.

The California Native Plant Society (CNPS) is a non-profit conservation organization dedicated to the preservation of native flora in California. The CNPS has been involved in assembling, evaluating, and distributing information on special-status plant species in the state, as listed in the *Inventory of Rare and Endangered Vascular Plants of California* (2001). A List 1A plant is a species, subspecies, or variety that is considered to be extinct. A List 1B plant is considered rare, threatened, or endangered in California and elsewhere. A List 2 plant is considered rare, threatened, or endangered in California but is more common elsewhere. A List 3 plant is a species for which the CNPS lacks necessary information to determine whether or not it should be assigned to a list. A List 4 plant has a limited distribution in California and is considered a “watch list” by the CNPS.

All of the plant species on List 1 and List 2 meet the requirements of the NPPA (Section 1901, Chapter 10) or Section 2062 and 2067 of CESA, and are eligible for state listing. Species maintained by CNPS on Lists 1 and 2 should be considered special-status species under the California Environmental Quality Act (CEQA). Some List 3 plant species also meet the requirements for state listing. Very few List 4 plants are eligible for listing but may be locally important and their listing status could be elevated if conditions change.

The CEQA requires government agencies to consider environmental impacts of discretionary projects and to avoid or mitigate them where possible. Under Section 15380, CEQA provides protection for both State-listed species and for any other species which can be shown to meet the criteria for State listing. The CDFG recognizes that Lists 1A, 1B, and 2 of the CNPS *Inventory* consist of plants that, in a majority of cases, would qualify for listing and these species should be addressed under CEQA review. In addition, the CDFG recommends, and local governments may require, protection of species which are regionally significant, such as locally rare species, disjunct populations, essential nesting and roosting habitat for more common wildlife species, or plants on the CNPS Lists 3 and 4.

Sensitive Natural Communities

In addition to species-oriented management, protecting habitat on an ecosystem-level is increasingly recognized as vital to the protection of natural diversity in the state. This is considered the most effective means of providing long-term protection of ecologically viable habitat, and can include whole watersheds, ecosystems, and sensitive natural communities. Providing functional habitat connectivity between natural areas is essential to sustaining healthy wildlife populations and allowing for the continued dispersal of native plant and animal species.

The CNDDDB is also responsible for maintaining up-to-date records of sensitive natural communities, those considered rare or threatened in the state. Until recently, the classification of natural communities used by the CNDDDB was generally a habitat-based approach defined by dominant or characteristic plant species as described by Holland in the *Preliminary descriptions of the terrestrial natural communities of California*. The classification of natural communities now used by the CNDDDB is based on the system described in the *Manual of California Vegetation*³. It is a floristically based system which uses two units of classification, called the alliance and the association in the *National Vegetation Classification*⁴. Although it is just now being used on a broad scale, this quantitative vegetation classification and systematic mapping method will allow conservationists and resource managers a greater understanding of natural ecosystems, their abundance, and their relative security. This new system is now used by the CDFG, CNPS, State Parks, National Park Service, U.S. Geologic Survey, and some local agencies, and has been or is currently being used to map the Golden Gate National Recreation Area, Point Reyes National Seashore, Suisun Marsh, Yosemite, Sequoia, and Kings Canyon National Parks, and Napa County.

The purpose of the CNDDDB natural community inventory was originally to identify and determine the significance and rarity of the various vegetation types in the state. While identifying and mapping sensitive natural communities continues to be a primary focus of the inventory, a more thorough understanding of all natural communities is essential to accurately define rarity, identify monitoring trends and threats, and broaden the approach to ecosystem-level conservation of biological diversity. This will presumably lead to mapping of vegetation throughout the state using the newer classification system. In the interim, sensitive natural community types recorded in the CNDDDB are still generally mapped according to the older Holland classification system. Considerable work is necessary in updating and refining existing mapping records, identifying new occurrences of sensitive natural communities, and expanding the data base to include the identification of high-quality stands of all natural communities.

Federal and State Authority

Although sensitive natural communities have no legal protective status under the state or federal Endangered Species Acts, they are provided some level of protection under CEQA. The CEQA Guidelines identify potential impacts on a sensitive natural community as one of six significance criteria. As an example, a discretionary project that has a substantial adverse effect on any riparian habitat, native grassland, valley oak woodland, or other sensitive natural community would normally be considered to have a significant effect on the environment. Further loss of a

³ *Manual of California Vegetation*, Sawyer and Keeler-Wolf, 1995.

⁴ *National Vegetation Classification*, Grossman et al, 1998.

sensitive natural community could be interpreted as substantially diminishing habitat, depending on its relative abundance, quality and degree of past disturbance, and the anticipated impacts to the specific community type. Where determined to be a significant under CEQA, the potential impact would require mitigation through avoidance, minimization of disturbance or loss, or some type of compensatory mitigation when unavoidable.

Wetlands

Although definitions vary to some degree, wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and flood waters, and water recharge, filtration, and purification functions. Technical standards for delineating wetlands have been developed by the Corps and the USFWS, which generally define wetlands through consideration of three criteria: hydrology, soils, and vegetation.

In recognition of the importance of wetlands, in 1977 the USFWS began a systematic effort to classify and map remaining wetlands in the country, now known as the National Wetlands Inventory Program (NWI). Using the USGS topographic maps as a base, the wetlands mapping effort provides a generalized inventory of wetlands according to the *Classification of Wetlands and Deepwater Habitats of the United States*⁵ used by the USFWS. Mapping under the NWI has been prepared through interpretation of aerial photographs, with only limited ground confirmation, which means that a more thorough ground and historical analysis may result in a revision to wetland boundaries in a specific location. The inventory is not an attempt to define the limits of proprietary jurisdiction of any governmental agency.

Federal Authority

The Clean Water Act was enacted to address water pollution, establishing regulations and permit requirements regarding construction activities that affect storm water, dredge and fill material operations, and water quality standards. This regulatory program requires that discharges to surface waters be controlled under the National Pollutant Discharge Elimination System permit program which apply to sources of water runoff, private developments, and public facilities.

Under Section 404 of the Clean Water Act, the Corps is responsible for regulating the discharge of fill material into waters of the United States. The term “waters” includes wetlands and non-wetland bodies of water that meet specific criteria as defined in the Code of Federal Regulations. All three of the identified technical criteria must be met for an area to be identified as a wetland under Corps jurisdiction, unless the area has been modified by human activity. In general, a permit must be obtained before fill can be placed in wetlands or other waters of the U.S. The type of permit depends on the amount of acreage and the purpose of the proposed fill, subject to discretion of the Corps.

Certain activities in wetlands or “other waters” are automatically authorized, or granted a nationwide permit which allows filling where impacts are considered minor. Eligibility for a nationwide permit simplifies the permit review process. Nationwide permits cover construction

⁵Classification of Wetlands and Deepwater Habitats of the United States, Cowardin, L., V. Carter, F. Golet, and E. LaRoe, U.S. Department of the Interior, Fish and Wildlife Service, 1979)

and fill of waters of the U.S. for a variety of routine activities such as minor road crossings, utility line crossings, streambank protection, recreational facilities and outfall structures. To qualify for a nationwide permit, a project must demonstrate that it has no more than a minimal adverse effect on the aquatic ecosystem, including species listed under the ESA. This typically means that there will be no net loss of either habitat acreage or habitat value, resulting in appropriate mitigation where fill activities are proposed.

The Corps assumes discretionary approval over proposed projects where impacts are considered significant, requiring adequate mitigation and permit approval. To provide compliance with the Environmental Protection Agency's Section 404(b)(1) Guidelines, an applicant must demonstrate that the proposed discharge is unavoidable and is the least environmentally damaging practicable alternative that will achieve the overall project purpose. The 1990 Memorandum of Agreement between the EPA and Corps concerning the Determination of Mitigation under the Guidelines prioritizes mitigation, with the first priority to avoid impacts, the second to minimize impacts, and the third to provide compensatory mitigation for unavoidable impacts.

State Authority

Jurisdictional authority of the CDFG over wetland areas is established under Section 1601-1606 of the Fish and Game Code, which pertains to activities that would disrupt the natural flow or alter the channel, bed, or bank of any lake, river, or stream. The Fish and Game Code stipulates that it is “unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake” without notifying the CDFG, incorporating necessary mitigation, and obtaining a Streambed Alteration agreement. The Wetlands Resources Policy of the CDFG states that the Fish and Game Commission will “strongly discourage development in or conversion of wetlands...unless, at a minimum, project mitigation assures there will be no net loss of either wetland habitat values or acreage”. The Department is also responsible for commenting on projects requiring Corps permits under the Fish and Wildlife Coordination Act of 1958.

In addition, the California Regional Water Quality Control Board is responsible for upholding state water quality standards. Pursuant to Section 401 of the Clean Water Act, projects that apply for a Corps permit for discharge of dredge or fill material, and projects that qualify for a Nationwide Permit must obtain water quality certification.

APPENDIX 2

***AIRPORT LAND USE COMPATIBILITY GUIDELINES -
NAPA COUNTY AIRPORT***

Table 3-1

Compatibility Zone Definitions

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- ZONE A** Runway Protection Zone: Dimensioned to encompass the future Runway Protection Zones of the respective runways for each airport as presented on the Airport Layout Plans contained in Part III of this document. Also includes areas lateral to the runway. These areas are regularly overflowed by aircraft below 50 feet above the ground. For this reason, these areas are considered high risk with regard to accident potential and any structures, buildings, trees or obstacles may create a flight hazard. These areas are also affected by high noise levels.
- ZONE B** Approach/Departure Zone: This zone is defined as the areas where aircraft will be below 100 feet above ground level as determined by the type of approach anticipated for that runway in the future. Future approach slopes are designated on the respective Airport Layout Plans and Airspace Plans for each airport in Part III. These areas are affected by substantial risk of accident potential due to the frequency of overflights at low altitudes. Noise levels are generally high with frequent loud single-events.
- ZONE C** Extended Approach/Departure Zone: This zone is defined as the area where aircraft will be below 300 feet above ground level as determined by the type of approach. The low altitude of aircraft in these areas indicates moderate to high risk of accident potential. Properties in this zone will be affected by substantial noise.
- ZONE D** Common Traffic Pattern: This area is defined by the flight pattern for each airport and illustrated in the respective "Airport Impact Areas" figures contained in Part III. These areas are routinely overflowed by aircraft operating to and from the airport with frequent single-event noise intrusion. Overflights in these areas can range from near the traffic pattern altitude (about 1,000 feet above the ground) to as low as 300 feet above the ground. Accident risk varies from low to moderate. Areas where aircraft are near pattern altitude (e.g., downwind leg) have the lowest risk. In areas where aircraft are at lower altitudes (especially on circle-to-land instrument approaches) a moderate level of risk exists.
- ZONE E** Other Airport Environs: An airport's influence area often extends beyond the typically defined compatibility zones during busy traffic hours and when larger aircraft are in the pattern. Aircraft overflights can occur anywhere in these areas when aircraft are departing or approaching an airport. Overflight annoyance is the primary impact element in these areas. The risk of accident is very low.

Revised 12/15/99

ZONE	LOCATION	IMPACT ELEMENTS	MAXIMUM DENSITIES ⁸		
			Residential ¹	Other Uses (people/ac) ² In Structures	Total in and out of Structures
A ⁹	Runway Protection Zone and Primary Surface	<ul style="list-style-type: none"> - High risk - High noise levels - Low overflights below 50' AGL 	0	0	10
B	Inner Approach/Departure Zone	<ul style="list-style-type: none"> - Substantial risk - High noise levels - Low overflights below 100' AGL 	0	10	25
C	Approach/Departure Zone	<ul style="list-style-type: none"> - Moderate risk - Substantial noise - Low overflight below 300' AGL 	0	50	75
D	Common Traffic Pattern	<ul style="list-style-type: none"> - Moderate risk - Frequent noise intrusion - Routine overflights below 1,000' AGL 	0	100	150
E	Other Airport Environs	<ul style="list-style-type: none"> - Low risk - Overflight annoyance 	See Note 7		

1. Residential land use and zoning designations are considered incompatible uses within the traffic pattern area (Zones A, B, C, and D) where aircraft overflights are frequent and at low altitude. The residential restrictions do not apply to residential uses allowable under agricultural land use and zoning designations.
2. The use should not attract more than the indicated number of persons per net acre. Net acreage is the total site area inclusive of parking areas and landscaping, less the area dedicated for streets. These densities are intended as general planning guidelines to aid in determining the acceptability of proposed land uses. Clustering of development within the density parameters should be encouraged to protect and provide open land/safety areas. However, in Zones A, B, and C the density on any one acre of a parcel should not exceed twice the indicated number of people per acre.
3. Dedication of an avigation or overflight easement or deed notice is required as a condition for new development within all zones. Also, height limit restrictions are applicable to structures and trees in all zones in accordance with Federal Aviation Regulation Part 77 and local ordinances. Uses which may be hazardous to flight are prohibited in all zones.
4. These uses typically can be designed to meet the density requirements and other development conditions listed.
5. These uses typically do not meet the density requirements and other development conditions listed. They should be allowed only if a major community objective is served by their location in this zone and if mitigation measures (i.e., noise attenuation) are incorporated that will minimize potential conflicts.
6. NLR = Noise Level Reduction; i.e., the attenuation of sound level from outside to inside provided by the structure. Noise level reduction measures may be required in areas with high single-event noise levels and where noise-sensitive users (schools, libraries, etc.) are proposed. Refer to Appendix C for criteria and noise attenuation measures.
7. Maximum residential densities in accordance with local adopted General Plans and zoning designations. Consideration should be given to the proximity of flight patterns, frequency of overflight, terrain conditions, and type of aircraft in determining acceptable location of residential uses. Referral to the ALUC for review of development plans prior to approval is recommended.
8. The purpose of these criteria is to provide a basis for determining those land uses which are compatible with airport activities. Specific land uses will be allowed only if they are also consistent with applicable General Plan policies and zoning ordinances.
9. All lands in Zone A are either within the Airport's boundaries or designated for acquisition in the Airport Master Plan.
10. Includes objects that penetrate FAR Part 77 surfaces, uses that would attract large numbers of birds (e.g., landfills), and uses that would create smoke, glare, distracting lights, or electronic interference.
11. Avigation easements will be required in lieu of overflight easements or deed notices where there is an appropriate public agency to review them.

Table 3-2

Airport Vicinity Land Use Compatibility Criteria

Napa County Airport

ZONE	PROHIBITED USES	OTHER DEVELOPMENT ³ CONDITIONS	EXAMPLES OF NORMALLY ACCEPTABLE USES ⁴	EXAMPLES OF USES NOT NORMALLY ACCEPTABLE ⁵
A	<ul style="list-style-type: none"> - All residential uses - Any assemblage of people - Any new structure which exceeds height limits - Noise sensitive uses - Uses hazardous to flight¹⁰ 	<ul style="list-style-type: none"> - Avigation easement required 	<ul style="list-style-type: none"> - Pasture, open space - Aircraft tiedowns - Auto parking - Most agricultural uses 	<ul style="list-style-type: none"> - Heavy poles, signs, large trees, etc. - Ponds
B	<ul style="list-style-type: none"> - All residential uses - Any noise-sensitive uses - Schools, libraries, hospitals, nursing homes, daycare centers - Uses hazardous to flight¹⁰ 	<ul style="list-style-type: none"> - Avigation easement required - Structures to be as far as possible from extended runway centerline - Clustering is encouraged to maximize open land areas - Minimum NLR of 25 dBA in office buildings⁶ - Building envelopes and approach surfaces required on all subdivision maps and development plans 	<ul style="list-style-type: none"> - All uses from Zone A - Parks with low-intensity uses, golf courses - Nurseries - Mini-storage 	<ul style="list-style-type: none"> - Retail uses - Office uses (except as accessory uses) - Hotels, motels, resorts - Theaters, assembly halls, and conference centers - Ponds
C	<ul style="list-style-type: none"> - All residential uses - Schools, libraries, hospitals, nursing homes, daycare centers - Uses hazardous to flight¹⁰ 	<ul style="list-style-type: none"> - Avigation easement required - Structures to be set back as far as possible from extended centerline - Clustering is encouraged to maximize open land areas - Building envelopes and approach surfaces required on all subdivision maps - NLR measures may be required for noise-sensitive uses (offices) 	<ul style="list-style-type: none"> - All uses from Zone B - Warehousing and low-intensity light industrial - Small retail uses - Outdoor recreation uses; marina, ball park - Office uses 	<ul style="list-style-type: none"> - Large retail buildings - Hotels, motels, resorts, health club - Restaurants, bars - Multi-story buildings - Theaters, assembly halls, and conference centers - Ponds
D	<ul style="list-style-type: none"> - All residential uses - Uses hazardous to flight¹⁰ 	<ul style="list-style-type: none"> - Overflight easement or deed notice required¹¹ - Building envelopes and approach surfaces required on all development plans within 100' of approach zones - Clustering is encouraged to maximize open land areas - NLR measures may be required for noise-sensitive uses⁶ 	<ul style="list-style-type: none"> - All uses from Zone C - Most non-residential uses - Accessory day care centers 	<ul style="list-style-type: none"> - Schools, libraries, hospitals, nursing homes - Large shopping malls - Amphitheaters - Ponds
E	<ul style="list-style-type: none"> - Noise-sensitive outdoor uses 	<ul style="list-style-type: none"> - Overflight easement or deed notice required¹¹ 	<ul style="list-style-type: none"> - Any permitted use 	<ul style="list-style-type: none"> - Amphitheaters - Landfills - Ponds

Table 3-2, Continued

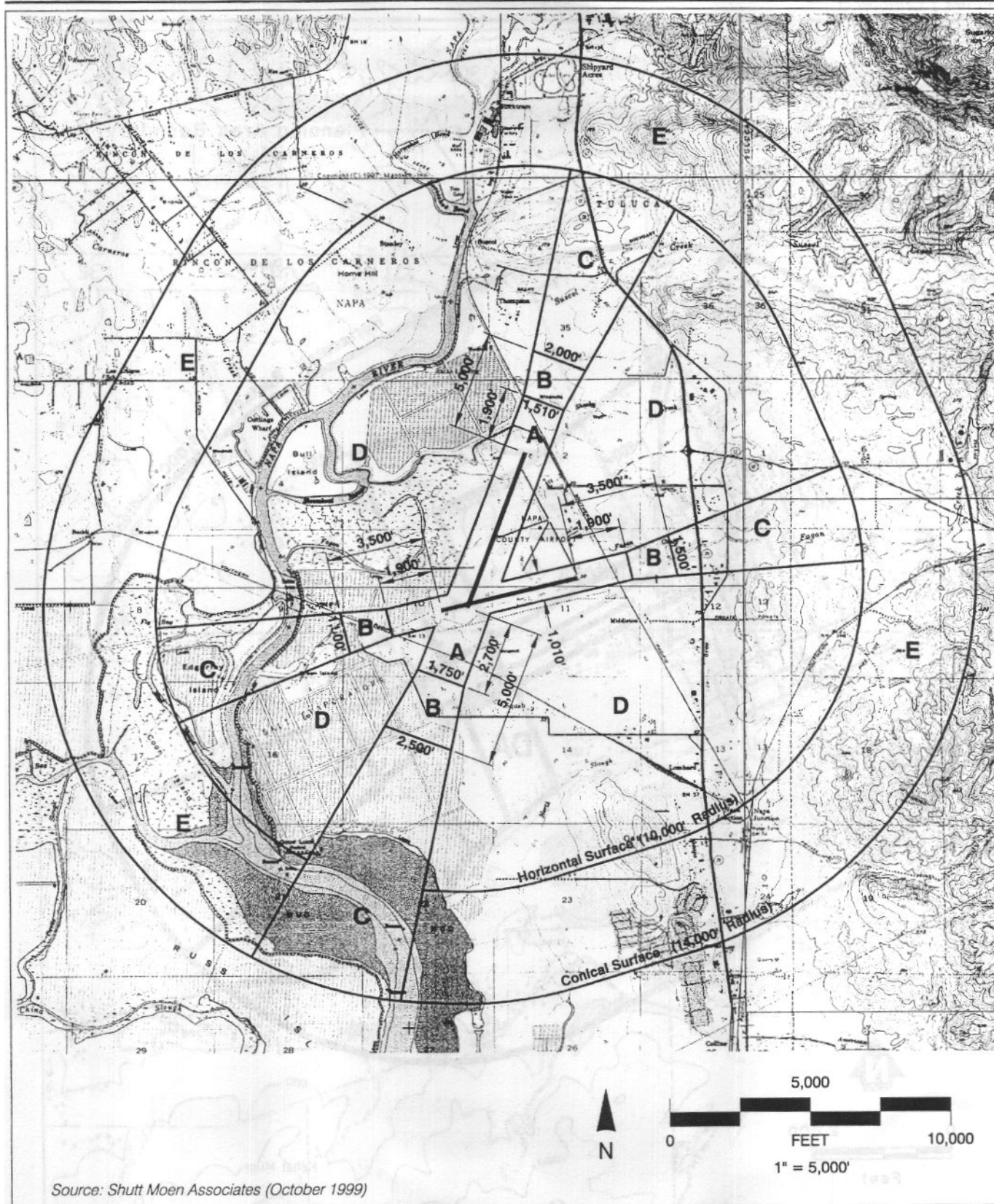


Figure 3A

Compatibility Plan Napa County Airport

APPENDIX 3

LEVEL OF SERVICE DELAY TIME

Level of Service	Control Delay Per Vehicle ^a
<i>Level of Service Control Delay Relationship Signalized Intersections</i>	
A	≤10
B	>10-20
C	>20-35
D	>35-55
E	>55-80
F	>80
<i>Level of Service Average Control Delay Relationship for Two-Way Control Intersections ^b</i>	
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-55
F	>50

Source: *Highway Capacity Manual 2000*, Transportation Research Board.

a In seconds. Control delay includes initial deceleration delay, queue move up time to first in line at the intersection, stopped delay at the first car in queue, and final acceleration delay.

b Side street stop sign control.